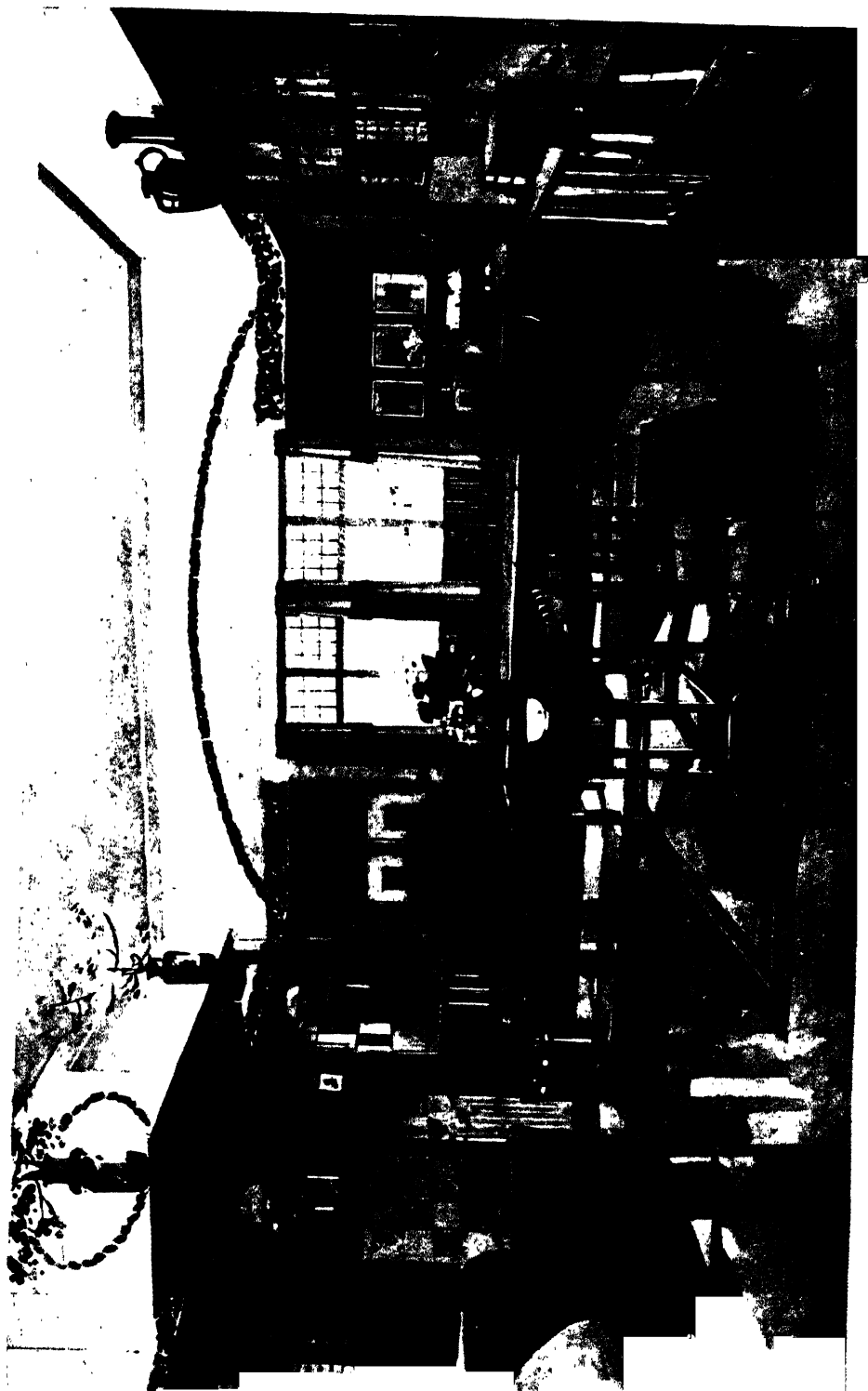


**THE BOOK OF
· THE HOME ·**

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THE BOOK OF THE HOME

A Comprehensive Guide on all
matters pertaining to the Household

NEW EDITION

Prepared under the Editorship of
MRS. C. E. HUMPHRY
(*"Madge" of Truth*)

With Contributions by
Many Specialists

VOLUME IV



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THE LAW OF HUSBAND AND WIFE.

I.—IN ENGLAND.

MAKING A WILL.

The importance of having one's affairs at all periods of one's life in proper order cannot be overrated. A bachelor owes it to his relations to make such arrangements as, in the event of his death, will leave no chance of dispute; and it is not only the wealthy bachelor who need attend to such matters. All men have some property, the distribution of which should be provided for. After marriage the importance of this matter is increased. Marriage introduces into one's family a quasi-relation whose rights are somewhat different from those of blood relations, and although in case of intestacy the law makes certain provision for a wife, this provision is seldom that which an affectionate husband would desire.

Intestacy.—In the case of intestacy of an unmarried man in England, his father, if living, takes the whole of the personal estate; if the father is dead, the mother, brothers, and sisters of the intestate take in equal shares, brothers or sisters of the half-blood having an equal claim with those of the whole blood, and the children of a deceased brother or sister taking the share which their parent would have received if alive. When a married man dies intestate, if he leaves a widow, but neither children nor descendants of children, one half of the personal estate goes to her and the other half is distributed in accordance with the provisions stated above. This short statement does not profess to set forth the whole law as to the next-of-kin (for which see *Statutes of Distribution* 22 and 23 Car. II. chap. 3, sec. 25); but the examples given are sufficient to show that the law does not look upon relations in the same way as do the majority of mankind. The same remarks apply in great measure to a married woman, but in the case of her dying intestate, the law has been kinder to the husband, who is entitled to the whole of her effects. It is therefore very desirable, upon marriage, to provide for the devolution of one's property in case of death, even though that property consist only of household furniture.

Marriage Settlements.—The best method, of course, is to make a settlement prior to marriage, and the fact that the property is not large should not deter one from treating the whole matter as befits its importance. Much subsequent unhappiness and misfortune may be avoided if the simple formalities here suggested are carried out. It is, however, necessary to

obtain the assistance of a solicitor for this purpose; no form which might be given here would prove of any real service in actual practice. To have a badly-drawn settlement made out by a layman, with such assistance as a common form could give him, would be worse than useless. It would probably lead to an expensive lawsuit if at any time anyone endeavoured to make use of it by standing upon the rights it was supposed to confer.

Wills.—When, however, a man decides not to part with the legal ownership of any of his property, even to his wife, during his lifetime, he must make such dispositions by will as he may think fit. The advantage of a will over a settlement is, of course, that the former may be altered as often as one likes, while the latter once made is irrevocable. The disadvantage attached to wills, on the other hand, is, that after all the creditors have been satisfied, little or nothing may remain, whereas one has no power to charge settled property with liabilities.

A will takes effect from the moment of death and, subject to the payment of creditors of the deceased, passes the property, both real and personal, over which the testator had absolute control in such manner and to such persons as he or she may have clearly determined. In the case of a large or complicated estate a solicitor must be employed in order to secure that the wishes of the testator shall not be set aside for want of compliance with some technicality.

When the estate is not complicated, consisting perhaps of cash and shares unencumbered in any way, a layman may be able to set out what is desired in simple language—the simpler the better,—avoiding all phrases having a legal sound, and being exceedingly careful to indicate persons and property with such exactness as to prevent any possibility of mistake.

The English Form of a Will.—The right method is to begin with the words “This is the last will and testament of—” (giving full name), then to set out the provisions of the will, the words following one another in close succession, filling each line and leaving no blank spaces, so that the question may not afterwards arise whether additions, either by the testator himself or by anyone else, have been made subsequent to the execution of the will. After execution, alterations can only be made by means of a codicil, which requires executing in exactly the same way as an original will; or a new will may, of course, be drawn up and executed. The provisions of the will having been set out, it should be executed properly, and the regular form of doing this must be followed exactly or the will is void.

The Execution of a Will.—In England two witnesses are required to the testator's signature, which must be written or acknowledged in the presence of both; they must also subsequently sign the document not only in the testator's, but in each other's presence. In order to establish that this has been carried out it is necessary to add to the provisions the following words in a single paragraph:—

<p>“Signed and declared by the above-named A. B., the testator, as and for his last will and testament, in the presence of us both present at the same time who, at his request, in his presence, and in the presence of each other have hereunto subscribed our names as witnesses.”</p>	<p>C. D. address. E. F. address.</p>
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If this particular attestation form is not used, the will is not thereby invalidated, provided always that it is attested by two witnesses, but evidence on affidavit that the formalities required by the Wills Act had been complied with would be required before it was admitted to Probate.

Points to Remember.—One should not forget to have executors in the will, and those appointed should be persons likely to outlive the testator. Another fact important to remember is that executors may be persons interested in the will, while witnesses cannot take anything under the instrument to which they are witnesses. A legacy to a witness does not, however, invalidate the will as a whole, but the legacy itself is void.

Codicils.—The effect of making a new will is to revoke any previous one, and therefore it is advisable in a codicil to refer to the will to which it is intended to be supplementary. Any subsequent will should contain an expression of the intention to revoke all previous ones, and it must never be forgotten that by English law the ceremony of marriage acts in itself as a revocation of any will made before it. A will made in view of marriage, therefore should not be executed until after the ceremony.

HUSBAND'S LEGAL POSITION.

The contract of marriage should never be entered into until after careful investigation of the legal change thereby effected in the status of the parties. Very few people appreciate the immense importance of this act, and, provided a man finds himself sufficiently well off to be able to maintain a wife, he generally cares nothing for the legal aspect of the matter.

Marriage and Ownership.—By the Common Law of England, and up to within quite recent times, that is to say until the year 1870, when the first Married Women's Property Act became law, the effect of marriage was to merge, during the period of the marriage, the existence of the wife in that of the husband, and to constitute them one person. Therefore no contract could be made between a man and his wife without the intervention of a trustee, and if a man married a woman to whom he was indebted, the debt was extinguished. Moreover, the wife's personal property became her husband's. He was also entitled to the rents and profits of her real estate and to all other beneficial interests, including any wages she might earn or the profits of any business carried on by her. On the other hand, in all contracts entered into by a wife, she was regarded as agent for her

husband and incurred no personal responsibility, inasmuch as, having been divested of her property, and rendered incapable of acquiring or retaining any, she could not in reason be held liable. It was decided, therefore, in the great case of *Manby v. Scott* (1) that husbands are bound to supply their wives with necessaries; (2) that the contract of a married woman is null and void; and (3) that if the wife purchases goods and the husband, by any act precedent or subsequent, ratifies the contract by his assent, the latter shall be liable upon it, such assent being proved to be either expressed or to be implied by circumstances. The husband also rendered himself by marriage liable for any debts or damages that his wife had incurred prior to her marriage with him.

Subsequent Legislation.—In consequence of the hardships that this state of things inflicted upon both parties, the first Married Women's Property Act was passed in 1870. It was amended and consolidated by the Married Women's Property Act of 1882. The differences between these two Acts are no doubt of interest to women married before the 1st of January, 1882, the date when the second one came into force, but as these pages are mainly intended for perusal by persons married more recently, it will probably be sufficient, after having put broadly the original position, to state equally broadly the position as it now is.

The first important change with regard to a husband is that he is now liable no longer for the whole of the debts and damages incurred by his wife prior to her marriage with him, but, unless there be any contract between them to the contrary, only to the extent of any property which he shall have acquired or become entitled to from or through his wife. Nor is the husband now liable for any wrongful act committed by his wife unless it has been committed by his authority. In short, the result of the Married Women's Property Acts has been to withdraw from the control of the husband the property owned by his wife, and to set up by his side a personality to all intents and purposes equal to, and in some respects greater than, his own. For instance, a husband, now that his wife can possess property, may make a gift to her, but with this condition—that if the property so given remains within his order or disposition or reputed ownership, the gift is not valid against creditors. He remains liable, as he always has been, for maintenance for his wife and children. If he neglects to maintain them his property can be seized by order of two justices in order to repay to the guardians any expenses to which they may have been put. The guardians cannot make any claim for the future, but the justices may, upon granting a separation order, and enforce the same by distress and commitment. A wife possessed of separate property is liable for the cost of parish relief supplied to her husband, and may be compelled under certain conditions to support her children.

Pledging Credit.—Being thus entitled to maintenance, a wife, if deserted, or if her husband refuses, though not deserting her, to supply her with necessaries, is at liberty to pledge her husband's credit for necessaries. But when the parties are mutually separated, the presumption in law is that

a separate provision has been made for her; and any creditor endeavouring to make the husband liable must prove that no such provision has in fact been made, and that the authority to pledge the husband's credit has not been determined by misconduct.

According to sec. 1, sub-sec. 3 of the Act, every contract entered into by a married woman will for the future be deemed a contract entered into by her with respect to, and binding upon, her separate property, unless the contrary has been shown; but in accordance with the law that the husband is liable for maintenance and necessities, the ordinary everyday purchases which a wife makes are made by her in fact as agent for her husband.

In case of disputes arising as to whether purchases are excessive in quantity, or the character of them such that no reasonable man could have inferred the necessary authority to have been given, the old question of what is or what is not a necessary will arise. In dealing with this very wide subject, the first thing to be taken into consideration is the position in life that the husband occupies. No hard-and-fast rule can be laid down, since what are luxuries in one station of life are necessities in another; therefore the courts must judge each case upon its own merits. In *Montague v. Benedict*, which is a leading case on the subject, the learned judge said: "If a tradesman is about to trust a married woman for what are not necessities (meaning necessities of life), and to an extent beyond what her station in life requires, he ought in common prudence to inquire of the husband if she has his consent for the order she is giving". Extravagance, then, even in quantity as regards things which might reasonably be called necessities within certain limits, should put tradesmen on inquiry, as otherwise they may be met with the assertion on the part of the husband that although *prima facie* things falling within the class of necessities, yet they are excessive in amount for a person in his position in life. In *Freestone v. Butcher* the learned judge said: "It is the bounden duty of tradesmen, when they find a wife giving extravagant orders, to give notice to the husband immediately if they mean to hold him liable".

Wife's Agency.—While therefore, under the Married Women's Property Act, the presumption is that a married woman is contracting in respect of her separate property, there still remains to her an implied authority to enter into contracts within ill-defined limits on her husband's behalf. The law has more and more come to regard the wife as an agent at will only of her husband, i.e. an agent only when actually authorized by him. That a tradesman has no right to presume the existence of the agency, which is a question of fact, and may be shown not to exist in fact by the evidence of the husband as to the conditions under which his wife is living with him.

If a man desires to utilize the services of his wife as his agent in matters not closely connected with the management of household affairs, he should always do this in the same way as he would grant such authority to any other agent, namely, by a written document, which should closely limit the powers intrusted, and should be placed in the hands of the wife as her

warrant to strangers for the authority she wishes to exercise. There are, however, acts which no such simple authority could delegate, for they require a power of attorney, just as much in the case of a wife as of another. It is not necessary to specify such acts here, as in this case a professional adviser would be necessary.

A Wife's Banking Account.—There is perhaps no matter which has bred so much dissension between married people as this question of pledging credit, and in cases where women take advantage of their position to obtain goods in excess of what their husband may think proper or can afford, there is the greatest possible difficulty in restraining them. Resort to publicity is avoided as long as possible, and although the position the courts have taken up has been one of assistance to the husband as far as possible, with due regard to the rights of innocent third parties, the trial of such actions is by no means satisfactory. Perhaps the most sensible plan that can be adopted is to begin by informing all those with whom the wife is likely to contract, and who have knowledge of the marriage, and therefore of the authority which is implied thereby, that such authority is absolutely withdrawn from her, and that a banking account has been opened in her name for the purpose of enabling her to supply herself and the household with all needful requirements. Payments made through such a banking account would be a continual advertisement that traders must look to the wife alone for payment. They would also be the strongest possible evidence in case it should be required to prove that the implied authority had been withdrawn, and that a new suitable means of conducting the household business had been substituted. That some such course as this has been widely followed appears to be evidenced by the fact that the policy of banking institutions has lately been to open branches in all directions, so as to give facilities for business of the kind. While the husband who feeds the account is afforded an accurate and ready means of controlling it, the wife's responsibility is also brought home to her far more effectually than by the mere handling and expending of money.

Authority of the Husband.—Apart from all financial relationship as between husband and wife, there are matters over which the husband has absolute and undisputed control. It is for him to decide what companionship his wife shall keep, where she shall resort, and to what individuals his house shall be open. He is within his rights if he forbids his wife to consort with any given person; he may decline to receive whomsoever he pleases as a guest beneath his roof, and he is not bound to give his wife his reasons for any decision to which he may come. But if his wife be disobedient to his commands in these particulars, he will not obtain the sympathy of any court to which he may be driven to obtain relief if he has unreasonably and without sufficient cause debarred, or attempted to debar, his wife from the usual and innocent diversions or friendships. This doctrine was however much weakened by the decision in *Reg. v. Leggatt*, where it was laid down that a husband has no such right to the custody of his wife as a parent has to the custody of his child. And in *Reg. v. Jackson*

the Courts went further and declared that if a wife chose to absent herself from her husband he had no right to compel her, by force or otherwise, to return to his dwelling, nor could he in anywise detain her. Blackstone says: "The husband might give his wife moderate correction, for as he has to answer for her behaviour, the law thought it reasonable to intrust him with power of restraining her by domestic chastisement in the same moderation that a man is allowed to correct his servants or children. But with us, in the politer reign of Charles II, this power of correction began to be doubted, and a wife may now have security of the peace against her husband, yet the lower rank of people who were always fond of the old Common Law still claim and exert their ancient privilege."

Mutual Separation Deeds.—In cases of incompatibility of temper or minor indiscretions on the part of the wife, such as intemperance, when the only point upon which the parties can bring themselves to agree is the impossibility of continuing to live together, it is usual to call in the family solicitor to draw up a deed embodying the terms upon which the parties will consent to live separately. This deed always provides a suitable maintenance for the wife, the payment of which is, of course, immediately stopped upon evidence of misconduct. Such a deed is naturally binding upon the parties according to its terms; and so long as no breach of its provisions occurs, no suit for the restitution of conjugal rights can be maintained.

Custody of Children.—The principle which guides the court in determining the question of the custody of children is that the interests of the children shall be the main consideration. Although the mother may be the innocent party, if it can be shown to be in the children's interests that they should be free from her control, the court will not shrink from making such an order. *Primâ facie*, however, if she be innocent, the court will place young children in her charge on the ground that she ought not to be deprived of their comfort and society in consequence of the wrong which her husband has done her. Children approaching years of discretion usually have the option of choosing with which parent they will reside, and the court will not oppose a preference properly made and expressed. The same principles guide the court in the cases of divorce and of judicial separation. When the separation is by deed by mutual consent, the question as to the custody of the children is, of course, one upon which the parties must come to an agreement, and it is one which produces very great difficulties in the way of the legal advisers of the parties. If reason is allowed to prevail, however, it will generally be agreed that infants needing a mother's care should be allowed to remain with the mother unless she has by intemperance or other misconduct rendered it inadvisable; whereas older children should be so provided for away from either parent that the unhappy differences may not be continually brought under their notice, and that their lives may be as little marred as possible thereby.

The husband has an absolute right to control his children up to the age of twenty-one in all their actions. In practice the wife exercises the major portion of such controlling rights, but the legal liabilities rest upon the

husband, and it is not until his decease that the law calls upon her to take up his duties, unless he is unfit to exercise such control, when the Court will delegate it to the wife. If the husband appoint a guardian to his children, by deed or will, the wife will act jointly with such guardian, and she may herself, by deed or will, appoint a guardian to act after the death of herself and the father, or after her death to act jointly with her husband.

WIFE'S LEGAL POSITION.

The Married Women's Property Acts had for their main object the entire alteration of the status of women after marriage, being intended to emancipate them from their old position of disability, which everyone felt it was impossible to maintain under modern conditions. The first Act may well be called the Magna Charta of English women. As so very generally happens with a law involving great changes, it was by no means complete in itself. It was a sort of trial measure, which, if successful, might be easily extended. The effect of the change was not very visible at first, as it did not apply to women married prior to the passing of the Act, on account of the mischief which would have arisen from such interference with the vested interests of the husbands already married. It was, however, seen in the course of a few years that the principle must be extended. An amending statute was passed, and some years later—in 1882—the Act was passed which consolidated and amended the previous Acts, and fixed the law as it now stands.

Present Position of Wife.—A woman married subsequently to 1882 is now to all intents and purposes in the same position legally as if she had not married at all. A few disabilities still attach to her position, but for most practical purposes she has all the advantages which an unmarried woman possesses, together with such legal advantages as marriage has always endowed her with. She is entitled to treat her own wages or earnings as her separate property; she can effect a policy of insurance on her own life or the life of her husband for her separate use; she can sue or be sued in her own name; her husband need not be joined in her actions; any damages she may recover will be her separate property, and any damages or costs recovered against her will be payable only out of her own estate. If, however, a married woman's property is subject to a restraint upon anticipation—i.e. a condition that she cannot borrow upon it or in any way anticipate the benefits which in the natural course of events are derived from it—she cannot make herself liable upon contracts in respect of such property as is not actually in her possession at the time of making the contract. Consequently, even if a married woman has separate property, if she is restrained from anticipating it, great difficulty may lie in the way of endeavouring to make her liable upon her contract.

It was decided in the case of *Scott v. Morley* that a married woman

who has made a default in paying a sum for which judgment has been recovered against her, cannot be committed to prison under the Debtor's Act. She is, however, if carrying on trade separately from her husband, subject to the bankruptcy laws as if unmarried; she is liable for all debts incurred, contracts entered into or wrongs committed by her before her marriage; she can also make a will leaving her real and personal property, but such will, if made while her husband is alive, only disposes of property of which she is possessed while he lived, so that property acquired after his death needs a subsequent will.

Before the Act, a wife's remedy against her husband by criminal proceedings was confined to cases of bodily violence. It has since been extended to wrongful acts in respect of her property.

Finally, a married woman is by the Act placed under a liability to the parish for the maintenance of her husband's children and grandchildren, similar to that already imposed upon the husband. Of course, he still remains liable for the support of his wife, children, and grandchildren.

The general effect of these Acts has therefore been, while leaving a married woman all the protection to which she has always been entitled from her husband, to endow her with nearly all the rights and liabilities of a woman unfettered by marriage, and to place her in almost the same position of independence as her husband. From a contractual point of view she may be looked upon as of all persons the most favoured. She is burdened with certain liabilities, it is true, but she has numerous defences placed at her disposal, and consequently, if so inclined, can take advantage of all her rights, while at the same time avoiding nearly all her liabilities. It should be observed that, if she consents to her husband's receiving her separate income while they are living together, she is not entitled to any account of how the money has been expended.

The Franchise.—In the same year, *i.e.* 1882, one step more was taken by women towards that position of political equality with men which appears to be their goal. By the Municipal Corporations Act women became entitled to vote under the same conditions as men at the election of Borough Councils, but it was held in 1889, in the case of *Beresford Hope v. Lady Sandhurst*, that this extension of woman's rights did not carry with it the right to be elected to and sit upon such Councils. In 1888 the right to vote at County Council elections was granted, and six years later, *i.e.* in 1894, not only the right to vote, but the right to be elected to and sit upon Boards of Guardians and Parish Councils was obtained. The Qualification of Women (County and Borough Councils) Act of 1907 granted the right to be elected to county and borough councils.

Whatever one may think of the extension of political rights to women, the history of the movement forces the conviction that sooner or later the right to vote for and sit upon all public bodies, even Parliament itself, will have to be granted. But it is at least questionable whether such rights will bring greater influence or a larger share of happiness to women than they now enjoy.

GIFTS AT LAW.

It has been shown that both man and wife may hold property of all kinds in their own right, the husband under the common law of the land, the wife by reason of rights conferred by statute law, and that both may devise such property at their death by will. There remains the question as to how such property may be disposed of during life.

In the early part of last century it was decided (*Irons v. Smallpiece*) that by the law of England there must either be a deed or instrument of gift, or there must be an actual delivery of the thing to the donee; and in the recent case of *Cochrane v. Moore*, heard in the Court of Appeal, this decision, after a very careful review of all the authorities, was upheld. In the former case a man, twelve months before his death, and while still in good health, gave a pair of horses to his son by word of mouth. When he died the son claimed them, but the court decided against him. The decision is an important one to remember. To prevent any possibility of dispute, a gift from a parent to a daughter—say, upon her marriage—should either be delivered to her in the presence of witnesses, or, as would be far better if it is of any importance or value, a deed should be prepared which would at any time prove her title. Sometimes, however, the parent, while making a gift, may desire to retain possession himself. A declaration of trust should then be made; the law will uphold the gift if the declaration is clear. The case of *Jones v. Lock* will illustrate what is meant. A father put a cheque for £900 into the hand of his son, nine months old, saying, "Look you here, I give this to baby; it is for himself, and I am going to put it away for him, and will give him a great deal more along with it." "Don't let him tear it," remarked the mother. "Never mind if he does," replied the father; "it is his own, and he may do what he likes with it." Then turning to the child's nurse, he said, "Now, Lizzie, I am going to put this away for my son." He then took the cheque away and locked it in a safe. A week later, meeting his solicitor, he said, "I shall come to your office on Monday to alter my will that I may take care of my son." The same day he died, and the cheque was found among his effects. It was held that, although a gift with a declaration of trust is valid, there had been in these circumstances no gift to, or valid declaration of trust for, the son. The judge said, "It was all quite natural, but the testator would have been very much surprised if he had been told that he had parted with the £900, and could no longer dispose of it."

In view of the new tax upon property (Finance Act, 1894), many persons, anxious to help their heirs to evade payment, made over by gift during life a large proportion of their estates, retaining only just sufficient for their own personal requirements. In the case, however, of *Earl Grey v. Attorney-General*, the House of Lords held that estate duty is payable where a conveyance of real estate contains a reservation to the grantor of an annual rent-charge, and provides that his debts to the time of his death shall be

paid by the grantee, and contains also a power of revocation in certain events. Thus any subterfuge to avoid payment of the duty will be upset by the courts.

Donatio Mortis Causa.—There is one more method of making a gift which must not be overlooked. It is technically called a “donatio mortis causa”, and is made by a person apparently on the point of death. To make it effective, there must be actual delivery of the thing, or the means of obtaining it, *e.g.* a key. Such gift is defeated not only by the donor’s getting better, but also by his revoking it. Even if the donor does not expressly say that he shall want the thing back if he recovers, the law implies a condition to that effect when a gift is made in such circumstances. A “donatio mortis causa” differs from a legacy in that neither probate nor executor’s assent is necessary. It differs from a gift, as in *Irons v. Smallpiece*, in that it is revocable, and is liable to pay legacy duty and to be taken to pay debts.

Gifts Defrauding Creditors.—Gifts made with the view to defraud creditors are defeated by the Act of 13 Eliz. c. 5, which declared that all gifts and conveyances made for the purpose of defrauding creditors shall be null and void unless made *bonâ fide* for valuable consideration, and to persons having no notice of the fraud.

DIVORCE AND MATRIMONIAL CAUSES.

There are six principal classes of cases which come under this heading, each of which is commenced by issue of a Petition addressed to the President of the Probate, Divorce, and Admiralty Division of the High Court, *i.e.* (1) Nullity of Marriage; (2) Jactitation of Marriage; (3) To establish Legitimacy; (4) Restitution of Conjugal Rights; (5) Judicial Separation; (6) Dissolution of Marriage. In the short space at our command it is impossible to give detailed information with regard to each of these classes. It must suffice for us to say that some of the grounds upon which a Nullity suit is founded could not be conveniently set out in a work of this description. Jactitation suits are now scarcely ever heard of, while Legitimacy suits are almost equally rare. Decrees for Restitution are sought usually for technical reasons which will subsequently be dealt with. Judicial separation may be obtained by either spouse for cruelty, desertion for two years or upwards, and adultery, but women under the Summary Jurisdiction (Married Women) Act can obtain a separation granted by Magistrates subject to revision by the High Court on the ground of cruelty only. A decree of Dissolution may be obtained by a husband on the ground of adultery of his wife alone, but a wife must prove adultery coupled with either cruelty or desertion for two years and upwards, or in this latter case that she has obtained a decree of Restitution which has been disobeyed. There are some other offences, as bigamy, rape, and the like, which enable a decree to be granted. The costs of obtaining decrees vary very much according to the

amount of evidence produced, and the length of the trial, and whether defended or not, but where an intending litigant can swear that after payment of debts, and with the exception of wearing apparel, he or she is not worth £25, and Council certifies that there is a reasonable ground for the proceeding, the litigant is enabled to proceed *in forma pauperis*, which has the effect of very considerably reducing the costs.

LEGAL POSITION OF GUESTS.

Lastly, the position which a householder occupies towards his or her guests demands a few words, under the word "guests" being included not only those friends who visit the house, but all persons who come to it upon either an express or an implied invitation as distinguished from trespassers. These persons are technically called licensees, and may be divided into three classes, viz. (1) those coming casually to the house on lawful business, (2) those expressly invited to enter for some business purpose, and (3) friends coming for social purposes.

Generally no licensee or guest can maintain an action against the host when the danger through which he has sustained hurt was of a latent character, *i.e.* unknown to the host.

Those coming casually to the house are only one degree removed from trespassers, and the only duty imposed upon the householder towards them is to see that there is no concealed danger: nothing in the nature of a trap by which injury might be inflicted upon them.

Towards those coming on express invitation, on lawful business, a much greater degree of care must be shown by the occupier. For, inasmuch as it may be assumed that the matter is of mutual interest, a duty is imposed upon the occupier to have the premises in such a condition that the person invited may safely respond to the invitation.

In the case of social friends, no doubt, to some extent the same duty is imposed upon the host, but, said the late Baron Bramwell in a case in which this question arose, "There must be an act of commission rather than of omission in order to render the host liable. If a person asked another to walk in his garden in which he had placed spring-guns or man-traps, and the latter, not being aware of it, was thereby injured, that would be an act of commission. But if a person asked a visitor to sleep at his house, and omitted to see that the sheets were properly aired, whereby the visitor caught cold, the visitor could maintain no action, for there was no act of commission but simply one of omission." Thus, in his usual pithy style, the great baron put the whole matter in a nutshell.

II.—IN SCOTLAND.

The laws of England and of Scotland differ so materially on the subject of Husband and Wife that the information given above must be taken as applying to England only. It is necessary, therefore, to state briefly the more important rules on this subject in the Scots law. The legal position of guests is to all intents and purposes the same as in England (see p. 12).

MAKING A WILL IN SCOTLAND.

The making of a will is a duty which every man owes to his relations, and it need hardly be said that the importance of having one's affairs at all periods of one's life in proper order, and of arranging for the succession to one's property in the event of death, is as great in one part of the kingdom as another.

By the law of Scotland, however, husbands, wives, and children have certain indefeasible rights of succession to movable estate, which cannot be defeated or reduced by any provisions a testator may make in his will, though they may be renounced or discharged by marriage contract. These are *jus relictæ*, *jus relictî*, and *legitim*.

Jus Relictæ and Jus Relictî.—The right of a wife to a portion of her deceased husband's estate, whether he leaves a will or not, is called *jus relictæ*, and is a right to one-third of her husband's movable or personal estate, if he leaves children, and to one-half if he leaves no children. *Jus relictî* is the corresponding right which a husband has to one-third or a half of his wife's personal estate on her death.

Legitim.—The portion of a deceased person's estate falling by law to children is called *legitim* or "bairns' part of gear", and consists of one-third of the movable estate equally among them if the deceased has left a husband or a wife, and one-half when there is no surviving spouse. A married man, therefore, survived by wife and children, can only deal effectually by will with one-third of his personal estate, unless the legal rights of his wife and children have been discharged by provisions in an antenuptial marriage contract or renounced.

Dead's Part.—The portion of a testator's personal estate which he is entitled to dispose of by will is called "the dead's part", and consists of one-third, or one-half, or the whole of his movable succession, the proportion depending upon whether he leaves a wife and children, children only, or neither wife nor child.

Intestacy.—It is impossible to give here the rules of division of an intestate's personal estate applicable to every case. The matter is now largely regulated by the Intestate Movable Succession Act, 1855 (18 Vict. c. 23), which made important alterations in the law. A few examples may, however, be given.

If a man dies domiciled in Scotland, intestate, leaving a wife and children, his widow takes one-third of his personal estate and his children take two-thirds, one-third in virtue of their right to *legitim*, and the remaining third as the deceased's next-of-kin. If he leaves a wife and no children, the wife takes one-half and his next-of-kin take the other half. If he leaves a father and brothers and sisters, the father takes one-half and the brothers and sisters take the other half equally among them. If the father is dead, but the mother survives, she will take one-third and the brothers and sisters will take the rest.

The children of brothers or sisters or their descendants who may have predeceased take the share of an intestate's movable estate which their parent would have taken had he or she survived.

Marriage Settlements.—Antenuptial contracts of marriage are of special importance not only because they afford a method by which a fund may be set aside for behoof of the spouses and children, secured from creditors, but also because the legal claims of succession above referred to may be renounced or discharged by such deeds. The right of *jus relictæ* may be expressly renounced by the wife in consideration of a provision which may turn out to be much smaller than she would have been entitled to claim as *jus relictæ*; and the children's claim to *legitim* may be effectually discharged in the marriage contract, by making some provision for them, however small, accompanied by a declaration that such provision is in full of *legitim*.

Wills.—The formalities required by the law of Scotland in connection with the making of a valid testament are few and simple, and although a prudent person will employ a solicitor, there is nothing to prevent a layman making a valid will without legal assistance. No particular form of words need be used, and no technical term is now necessary. All that is required is a distinct expression of the testator's "concluded will or purpose" in regard to his estate. Unless it is holograph (that is, written entirely by the granter's own hand), it must be attested by two witnesses, who must see the granter sign or hear him acknowledge his signature. Each of the witnesses should sign his or her name opposite the granter's signature on the last page, and add the word "Witness" after his or her signature. The witnesses' names and designations (*i.e.* their occupations and addresses) should be fully set forth in the body of the deed or in the testing clause, but if the designations are appended to or follow the witnesses' signatures it will be sufficient. The witnesses should have no interest in the deed, and must be at least fourteen years of age. If, however, a witness were a beneficiary under the will, the deed would not necessarily be invalidated, but if the will were challenged, the fact that the witness had an interest in it would be a most material circumstance in the consideration of the judge or jury in determining the question of its validity. Each page of the will must be signed by the granter if the deed consists of more than one sheet.

If the testator owns estate in England it may save trouble if he

executes the will in the English form, which is explained above. An execution in that form would be valid in both countries.

Holograph Wills.—A holograph will (one written entirely by the grantor's own hand) will receive effect if its meaning be clear, although not attested by witnesses. It should be dated, and should state that it is written entirely by the grantor, and it will be held to be granted of the date it bears in the absence of contrary evidence. Each page should be signed by the testator.

Points to Remember.—It is of great importance when making a will to name an executor or executors to uplift the estate and carry out the purposes of the will. If this is not done an application to the court will be necessary for the appointment of an executor.

The legal rights of wife and children should also be borne in mind, for any provision in a will which would infringe upon these rights will receive no effect in that direction, unless with their consent.

Codicils.—A will may be altered or revoked by the grantor at any time, and this is frequently done by a codicil added to the original will. The mere making of a new will revokes all previous testaments, so far as inconsistent with them, but a new will should contain an express revocation of all previous testamentary writings. The birth of a child to the testator in most cases implies revocation of a will made prior to its birth, but if not expressly revoked, and allowed to remain unaltered for a long time, the circumstances of the case might be held to show that the testator intended the will to stand, and this intention would be given effect to in so far as it did not infringe the child's legal rights.

In making alterations on a will by codicil the will should be expressly referred to. A declaration is usually inserted in the codicil confirming the will to which it is supplementary, except in so far as altered by the codicil.

HUSBAND'S LEGAL POSITION.

Jus Mariti.—As in England, so also in Scotland, husband and wife at common law were one person—and that person was practically the husband. This fiction, which, though not maintained with absolute consistency, robbed the wife of a distinct *persona*, also deprived her of her personal property. On marriage her whole movable estate passed at common law to her husband as his absolute property. This right of the husband is called *jus mariti*, and extended to every movable right belonging to the wife at the date of the marriage, and also to whatever movable property she might acquire during the marriage, unless such property was given or bequeathed to her exclusive of her husband's rights. It included her earnings and the income of her heritable estate, though not the heritable estate itself.

Subsequent Legislation.—The obvious hardship resulting from these rules of the common law led to their modification by statute. By the Conjugal

Rights Act, 1861, a wife deserted by her husband may obtain an order of protection from the court, which secures her property to her in the same way as if she were unmarried. The Married Women's Property Act, 1877, protects the earnings of a married woman from her husband, and at the same time frees the husband from liability for his wife's antenuptial debts, except to the extent of the value of any property he may have acquired through his wife by the marriage.

By the Married Women's Policies of Assurance (Scotland) Act, 1880, married women were enabled to effect policies on their own and their husbands' lives, exclusive of the husband's *jus mariti* and right of administration.

Finally, the Married Women's Property (Scotland) Act, 1881, abolished the *jus mariti* altogether in regard to marriages contracted subsequent to the passing of the Act, and provided that the income of the wife's estate should be payable to her on her individual receipt or to her order. The whole estate of a woman married subsequent to the Act, therefore, remains her own property.

Husband's Right of Administration.—But although the husband's *jus mariti* has been practically abolished, his right of administration still subsists with little modification. A married woman is still under the curatory of her husband. The right of administration has been defined as "not a right of property, but a right of managing property whereby the husband's consent must be obtained to every act of administration". The Married Women's Property Act, while expressly excluding the *jus mariti*, which is a right of property, from the estates of women married after the passing of the Act, deals with the right of administration only to the extent of empowering the wife to uplift the income of her estate on her own receipt. To all other acts dealing with her property the husband's consent is necessary. She cannot sue or be sued, nor act as trustee or executrix, nor assign or convey her property (except by will) without her husband's consent. The reservation of the right of administration in the Scotch Married Women's Property Act thus makes the results of the Statute upon the legal position of married women markedly different from those following upon the English Act.

Husband's Obligation to Support his Wife.—The husband is bound to supply his wife with necessary food and clothing, and the failure to discharge this natural obligation would constitute cruelty justifying an action of separation. But if the wife voluntarily live apart from her husband she cannot compel him to aliment her while he is willing to receive her into his house, unless his conduct has been such as to justify the wife in refusing to live with him and decree of separation has been obtained. If the wife living apart from her husband has ground of complaint against him, but has not obtained a decree of separation, the court will allow her interim aliment to enable her to go to the court and demand judicial separation. But she must either obtain decree of separation, or go back to his house if he offers to receive her, or she must support herself.

Wife's Agency.—The husband is bound by his wife's contracts only when she is acting as his agent, either by his express authority or by implication. The form in which this question most commonly arises is in regard to a husband's liability for his wife's dealings with shopkeepers and tradesmen. The wife is presumed to be *præposita negotiis domesticis*, that is, authorized to act in domestic affairs, and the husband is bound by contracts she may make in this capacity. The husband being bound to support his wife and family, he will be liable for contracts made by his wife for the supply of necessary furnishings for the use of the family. What are necessary furnishings is in every case a question of circumstances depending upon the rank and position in life which the parties occupy.

The husband cannot escape from this liability to tradesmen from whom his wife may purchase goods of the nature of furnishings, except by having her "inhibited" by the court, or by giving private notice to individual tradesmen. He will still be liable for necessary furnishings notwithstanding inhibition, unless he can show that he has made provision for their being supplied in some other way.

Authority of the Husband.—"The husband is lord, head, and ruler of the wife by the express ordinance of God", says Lord Stair, an old Scots institutional writer: and this ordinance has not been entirely revoked by recent legislation. The husband is still the head of the household. It lies with him to determine where the home of the family shall be, and the wife is bound to live with him at home or abroad wherever he shall determine. His domicile fixes hers. In all her public actions she is subject to his curatory. She cannot dispose of her property, nor act as trustee or executrix, without his consent. The husband's authority, however, has its limits. It does not include the right to inflict chastisement, or to imprison his wife in his house: nor can he force her to live with him. But if she will not live with him he is not bound to aliment her, unless his conduct justifies judicial separation. The converse is true, and a wife cannot compel her husband to take her into his house.

The husband has the right to say who shall visit the house and with whom his wife shall consort. He may prohibit any of her friends or relatives from coming to the house, and it lies entirely with him to determine in what style the family shall live.

The husband is not responsible for the criminal or unlawful acts of his wife, unless he is accessory to, or has authorized them. Nor is he liable for her antenuptial debts, except to the value of any property which he may have received through his wife at, before, or subsequent to the marriage.

Mutual Separation Deeds.—Married persons may enter into a formal agreement to live separate, though formerly such contracts were regarded as *contra bonos mores* and therefore null. Even now in Scotland they are not binding on the parties. They may be terminated at any time by either of the parties expressing willingness to live together again, and neither spouse is debarred from applying for judicial separation through having entered into such an agreement. A deed of separation, however,

will be a valid ground for claiming aliment which the husband may have undertaken to pay by the deed, when it is past due, but a claim for future aliment is not well founded on a deed of separation. Nor can a wife sue for aliment at an increased rate while living separate under agreement, and the husband can recall his undertaking to pay aliment at any time, if he is willing to take his wife back. The wife's only alternatives are to go back, or to obtain a judicial separation, or to do without aliment from her husband.

WIFE'S LEGAL POSITION.

The general effect of recent legislation on the legal position of married women in Scotland has been to secure to them the right to their own property and earnings, without, however, modifying to any great extent the husband's curatorial power and right of administration of his wife's affairs. The position of a married woman in the eye of the Scots law is still materially different from that of the unmarried woman, and from that of a married woman in England. Her property and her earnings are her own, and she may uplift the income of her estate on her own receipts; she may insure her own or her husband's life, exclusive of his *jus mariti* and right of administration; but she remains under many disabilities that do not affect her unmarried sister. She cannot sue or be sued, or grant any deed, or enter into any contract, or dispose of her property (except by will), without her husband's consent, nor can she grant any binding personal obligation, as, for instance, a bill or promissory note. She cannot be imprisoned for debt—a privilege which nowadays only a very limited class of debtors in Scotland does not enjoy.

Where, however, the husband's *jus mariti* and right of administration have been excluded from her separate estate by antenuptial marriage contract or otherwise, a wife can within certain limits grant a binding personal obligation in regard to such separate estate. It has been held that a married woman may invest her separate estate in trade, when the husband's *jus mariti* and right of administration have been excluded, and may incur personal obligations in respect of such separate estate.

There seems to be no express decision that a wife with separate estate is bound to maintain the children of the marriage while her husband is alive. This duty, of course, is primarily on the husband, but if he is without means, or is incapable of fulfilling it, there is authority for holding that the wife would be bound to do so. She would doubtless have a right of relief against her husband for the expense thus incurred.

A married woman can make a will disposing of her whole estate without her husband's consent; but she cannot deprive her husband of his *jus relictii* or her children of their *legitim*.

Custody of Children.—The father has the sole control of the person of his children, and the right of directing their upbringing and education.

The extent of control differs, however, both in degree and in kind, after the child has passed pupilarity—the age of 14 in boys and 12 in girls. After pupilarity the father's authority may be lost entirely, either by abandoning the child to his own resources “or by circumstances or conduct showing the father's inability or unwillingness to discharge rightly the parental duty to the child”. The father is also administrator of his children's estate during their minority, unless another curator has been appointed by the person bestowing the separate estate upon the children. A daughter on her marriage ceases, though a minor, to be under the administration of her father, for then she passes under the curatory of her husband.

During pupilarity the father has the legal right to the custody of his children, and can only be deprived of it by the Court of Session, which may make such provision as it deems proper in regard to the custody, maintenance, and education of any pupil children of a marriage which forms the subject of any action brought before it. The chief consideration which guides the court in determining the right to custody is the children's interest and welfare. Practically there is no limit to the discretion of the court in the matter. If a mother is deprived of the custody of her children, however, she is entitled to have access to them under such regulations as the court may make, though, in the case of misconduct, she may be entirely deprived of the right to visit her children.

On the death or insanity of the father, the mother is entitled to the custody of pupil children.

GIFTS AT LAW.

The owner of property of any kind may make a free gift of it to another person, and in the case of a movable subject the gift may be completed by simple delivery. If the subject of the gift cannot be delivered immediately to the donee, or is in its nature incapable of actual delivery, a written deed of gift is the proper evidence of the donation. Donation will not be presumed, and the burden of proving donation is on the person averring that he has received anything as a free gift. The law has been thus stated by Lord Fullerton:—“When we say that donation is not to be presumed, the only practical result is that it must be sufficiently proved”.

Besides pure donation, Scots law recognizes (1) Donations *mortis causa*, and (2) Donations between husband and wife.

Donations Mortis Causa.—A donation *mortis causa* is a gift made in contemplation of death, and is revocable by the granter at any time. It is not good against creditors. A written deed is not necessary to constitute donation *mortis causa*, but delivery either actual or constructive is essential. If the donor recovers from his illness, he is entitled to revoke the gift and receive back the subject from the donee.

Donations between Husband and Wife.—By the law of Scotland gifts

made by a husband to his wife or by a wife to her husband are revocable during the lifetime of the donor. Even though the gift should be conveyed to a third person in trust by one of the spouses it is revocable, in so far as it is a gratuitous bestowing of a valuable right by one spouse upon the other. Mere presents of reasonable value according to the rank of the parties are not revocable; and a reasonable provision by a husband in a post-nuptial contract of marriage is effectual if he is solvent at the time, and there was no antenuptial contract. The provisions, however, must be reasonable and suitable to the husband's circumstances at the time, and will be sustained only in so far as they take effect after the husband's death. So far as excessive they will be revocable. Moreover, it is impossible for a husband to put aside for behoof of his wife during marriage any sum of money from which his creditors will be excluded in the event of his bankruptcy.

Gifts in Fraud of Creditors.—Gifts made by an insolvent person on the eve of bankruptcy to “conjunct and confident persons”, that is, relations or friends, are illegal. An old Scots statute of 1621 declares all such alienations by an insolvent person null and void. Voluntary dispositions, assignations, or other deeds granted by a bankrupt within sixty days of bankruptcy, either in satisfaction of a debt or in further security, which give a preference to one creditor over another, are also void and null by statute.

DIVORCE AND OTHER CONSISTORIAL ACTIONS.

Consistorial Actions in Scotland are those arising out of the relationship of husband and wife, the most important of these being actions of divorce and adherence, of declarator of marriage or of nullity of marriage, actions of declarator of legitimacy and bastardy, and actions of separation and aliment between husband and wife. These actions, except actions of separation and aliment, are only competent in the Court of Session, and even when no defence is stated, evidence must be led before the Court to justify decree being granted.

Divorce may be obtained in Scotland on either of two grounds, adultery or desertion. If either spouse has been guilty of adultery the innocent spouse may obtain decree of divorce. It is not necessary to prove cruelty, or any other kind of misconduct besides infidelity against either husband or wife. There are, however, certain valid grounds of defence to an action of divorce founded on adultery. Condonation, that is forgiveness and continuance or renewal of marital relations, following upon known acts of unfaithfulness, will deprive the injured spouse of the right to divorce; and a husband's connivance in his wife's guilt would be a good ground of defence to an action of divorce. A counter charge of adultery is not in Scotland a valid defence to an action of divorce, although, if proved, it affects the interests of the parties in the marriage contract funds, and their

claims upon each other's property. If a counter action of divorce on the ground of adultery is brought, and both parties are proved to be guilty, each may obtain decree of divorce against the other in Scotland. In England the rule is different.

Divorce may be obtained in Scotland, also on the ground of desertion, if either spouse obstinately and maliciously refuses to adhere for a period of four years continuously. The desertion must be wilful and deliberate and without reasonable cause. It must not be due to such reasons as occupation, or professional duties or employment. The spouse claiming divorce on this ground must be really desirous to live with the deserting partner.

The effect of a decree of divorce on the property of the spouses is the same as if the offending spouse had died. "The party injurer loseth all benefit accruing through the marriage, but the party injured has the same benefit as by the other's natural death," says Lord Stair. Donations made by the innocent spouse to the guilty are revoked by the decree of divorce; but gifts received by the innocent spouse become irrevocable.

An action of divorce must be free from collusion between the parties; that is to say, a husband and wife may not arrange between themselves to procure divorce. The law takes various precautions against such collusion. The pursuer is required to take what is called the "oath of calumny" and to swear that the action is not brought in collusion with the defender; and the Lord Advocate may enter appearance in any divorce case and lead any evidence he thinks fit should he suspect that there has been collusion between the parties.

Actions of Separation and Aliment.—Actions of aliment, or of separation and aliment and for regulating the custody of children, may now be brought before the Sheriff Court, the Sheriff Courts (Scotland) Act of 1907 having extended the jurisdiction of that Court to such actions. Until that Act was passed a wife living separate from her husband could only obtain from the Sheriff Court decree for interim aliment to allow her to make application to the Court of Session for a permanent order.

FRANCHISE.

Until the year 1881 no woman was entitled to vote at Municipal or Parliamentary Elections, but by the Municipal Elections Amendment (Scotland) Act of that year the right to vote at Municipal Elections was conferred upon unmarried women and women living separate from their husbands, provided they possessed the qualification that entitled men to vote. By the Local Government (Scotland) Act 1889 the same privilege was granted in County Council Elections. A step further was taken by the Qualification of Women (County and Town Councils) (Scotland) Act of 1907 which provides that a woman shall not be disqualified by sex or marriage for being elected or being a councillor of the Council of any county or burgh in Scotland.

THE MASTER'S DUTIES.

INSURANCE.

Insurance, properly speaking, is the provision against something which may happen, such as fire (see vol. ii. p. 57), burglary, and accident. Assurance is a provision against something which must happen, death or old age. So we speak of fire insurance and life assurance.

Taking the population generally, there is at every age an average period which each person may expect to live, this average increasing as the weaker individuals die off. Thus, while a man at 30 may expect to live 33 more years, yet if he reaches the age of 40, he may expect not 23 but 27 years. At 50 he may look for 24 years, at 60 for 14, at 70 for 9, and so on.

The Principle of Assurance.—Now if a number of people, all of the same age and state of health, were to club together to establish by yearly contributions a fund to pay say £100 at the death of each, they would each have to pay into the fund the same amount yearly. Some would die before attaining the expectation of life, and their families would benefit, while others living longer, would pay in more. But the result is an equitable one, for the expectation of all was the same at the time of commencement.

Life assurance companies are based on these principles, the sums to be paid varying according to the expectation of life at each age. Their tables, or rates, are compiled after taking into account, on the one hand, the rate of interest to be derived from the funds invested, and on the other hand what is technically called the loading, which provides for the expenses of management, the cost of obtaining assurers, the amount to be paid shareholders for their guarantee, &c. At fixed periods the affairs of the company are examined, and the profits are divided under the name of "bonus".

Different Methods of Assurance.—There are many different ways of effecting an assurance. The simplest takes the form of payments of a given sum each year for the whole term of life, without profits, the rates in this case being the lowest. By another method payments are made for the whole term of life, with share of profits; and by a third the payments are for a limited number of years, the sum assured to be paid at death, either with or without profits. The last method is preferable to either of the other two, for often as life progresses the earning power does not increase, while calls upon the purse become heavier; so the cessation of payments becomes a relief. If it be desired to make provision for old age, an assurance can be made for the payment at a given age of a fixed sum, either to the assurer,

or, should he die before attaining that age, to his representatives. The rate for this last form is the highest, for the company may have to pay the money before the age provided for, and *must* pay it when that time comes, besides losing all chance of profit from the assurer's living beyond that age.

Since the first establishment of assurance companies, many inducements in the form of what may be termed compound assurances have, in the competition for business, been devised. By the simplest form the assurer, instead of receiving the money at a given time, receives an annuity beginning at the fixed age. Or, he can take part of the sum in cash or as an annuity, and leave the balance to be paid to his representatives at death. Again, many offices provide for a reduced premium for the first five or seven years and a larger rate afterwards; but in this case the assurer should be quite certain of being able to pay the larger premium in the future. Any variation from simple assurance which increases the risk of the company must be paid for in some way by the assured.

Choice of an Assurance Office.—The method of assurance decided upon, the next thing to do is to make choice of the office. Shall it be a Proprietary one, offering in the shareholders' capital some guarantee of stability—a guarantee which has, of course, to be paid for? Or, shall it be a Mutual one, where all the profits are divided amongst the assured? As a rule, the latter should be the better. In a Mutual office the assured at the annual meetings has a voice in the management, but on the other hand most people are lax in this particular, and many prefer that the shareholders, for the sake of their own profits, should look after this for them.

Whether a Proprietary or Mutual office is decided upon it is very important that its stability and method should be inquired into. It is not a present bargain that is being made, but one to be fulfilled many years hence. Mr. Gladstone said: "You know a good deal about the position of an insurance society when you get three things—first of all, its date; secondly, its income from premiums; and thirdly, its accumulations. From the relation of these things one to another you know pretty clearly the state of the society." An eminent actuary gives this caution: "Do not insure with an office that possesses an insurance fund, or accumulated capital in hand, of less than a million, or at any rate three-fourths of that sum, without inquiry into the condition of the company".

As regards the ratio referred to, it has been generally taken that an office which has been over twenty years in existence should have ten years' premiums in hand. This governs present liability. The future depends upon, firstly, the rate of expenses; and secondly, the interest received on investments, the tables and bonus being partly based upon it. A new office, or one pushing its business, will spend a larger amount of its income in expenses, but it is evident that the smaller the percentage of a "live" office under this head, the better will be the result to all concerned. Six to seven per cent seems about the average of the offices, so it would be best to select one which (including shareholders' dividends) does not exceed this rate. Most offices invest their funds at about four per cent, but the rate of

dividends received from sound investments has been for years declining, and as a large sum has to be kept in hand for claims and current expenses, it is certainly not advisable to select an office assuming an earning power of more than three per cent. If an office is economically managed and its rate safe, the rate of premium is not of great moment, for the varying rates of different offices should equalize themselves in the profits, that is to say, the bonuses. But to a young assurer, the other points being equal, the rate is of moment, for in the event of an early death, the lower the rate the greater is the amount assured at death for a given sum.

Assurance Policies.—Care must be taken to fill up the application form accurately, for a wrong statement might vitiate the assurance. If the policy is meant to act as a marriage settlement, it must be taken out before marriage, with the aid of a special form obtainable from the office. An existing policy can be settled on the wife by an indorsement (which a solicitor should prepare), acknowledged by the office. Or, a policy can be taken out in the wife's name on the husband's life, but, lest the wife might die first, she should make a will bequeathing the policy.

Should the office decline the assurance after the usual medical examination, this need not be regarded as an opinion that death will shortly occur. Ask the office if it will assure you at a higher rate, and if so, at what rate? And then, if it still declines, try elsewhere. A mere temporary ailment may make the office cautious, and some are more particular than others.

The assurance accepted, it is advisable to have the age admitted on the policy. A copy of the registry of birth or of the baptismal certificate will suffice; or, failing these, a certified copy of the entry in the Family Bible, or a statutory declaration by a friend having full knowledge of the age.

If it be necessary to discontinue the policy, it can be sold by auction, or surrendered to the company for a payment in cash (generally about one-third of the premiums paid) or for a completed policy for a smaller amount. The small payment is not unfair, for the office has to recoup its loss on other lives that have lapsed before attaining the average expectation.

Policies can be taken out for small terms to cover loss likely to arise from given events, such as the death of the head of the family before an estate falls in. In fact, the resources of life assurance to guard against monetary loss arising from life contingencies are almost endless.

Annuities.—Most offices sell annuities, and, having a wider range of investment, are able to compete successfully with the Government Office. The same care is necessary in selecting the office as in life assurance.

Accident Insurance.—Many years ago accident insurance began with the sale of tickets at railway-stations to cover the risk of only the journey then contemplated, the charge and amount insured varying with the class in which the purchaser travelled. Soon annual policies were issued, and gradually the scheme was made to cover all descriptions of accident, the rate of premium being governed by the occupation of the insured, a machine-minder, for instance, running more risk than a clerk. The accident forming the subject of a claim must not have occurred during a surgical

operation, or owing to a fit, disease, or illness; nor must it arise from fighting, war, intoxication, insanity, racing, entering or leaving a railway train while in motion, or through committing a breach of a railway company's by-laws. In short, the accident must not have occurred through the negligence or fault of the assured. Nor must the assured travel beyond the limits of Europe, without having given notice to the office and paying the extra premium for the extra risk.

Simple accident insurance provides only for the payment of a lump sum at death, or on the loss of two limbs or two eyes arising from a physical accident, and occurring within three months from that accident, an allowance being also made for a period not exceeding twenty-six weeks if the insurer is incapacitated totally from business by an accident unaccompanied by the losses mentioned. Compound policies, at higher premiums, give payments for less serious injuries, such as the loss of one eye or of one limb, a double payment if death results from an accident to a railway train, an allowance during illness from fever, &c. The more risks insured against, the greater the premium.

All changes of residence must be notified to the company, and renewal premiums paid within the days of grace. Notice of any accident must be sent to the company, with full particulars of the injury and a medical certificate. The company has the right to send its agent and medical officer to inquire into the cause of the injury and to examine it. Further, if death ensues, it has the right to hold a post-mortem examination if there is any reasonable doubt whether the accident was the actual cause of death.

Many newspapers and publications gratuitously give very large insurances covering special risks. To benefit by these, purchasers must rigidly carry out the printed conditions, or the gift will not avail.

Burglary Insurance.—Though the various companies insuring against burglary have been gradually bringing their conditions into line, there are still variations amongst them, and it is desirable that an insurance should be effected with as wide conditions as possible, and covering housebreaking and larceny as well as burglary. Damage arising out of burglary should be included, for the burglar, sometimes from spite at not finding enough portable property, and sometimes from mischief, will often damage and destroy more than he takes away.

Burglary is theft after a forcible entry into premises between nine at night and six in the morning. Housebreaking is the same between six in the morning and nine at night. Larceny is simply theft, whether the thief enters by an unguarded door, or obtains admittance by false pretences, such as looking after gas or water fittings.

If a care-taker, servant, or inmate of the house is concerned in the burglary, &c., whether as principal or accomplice (a servant admitting a burglar friend, for instance), the company is not responsible, nor is it from loss arising out of a fire or riot. The companies will not insure plate, jewellery, &c., if a house be left without a care-taker; and as regards the rest of the contents, a house must not be left unoccupied more than seven

consecutive days, or for more than ten separate days and nights in any one year. In ordinary cases a loss of under £1 is not paid for, nor more than £25 on any one article. As for Fire Insurance, the total value insured has to be divided under different heads. For Fire Insurance see vol. ii., page 57, and for insurance against liability under the Workman's Compensation, Act, 1906, &c., see vol. ii., page 95.

CARE OF PREMISES.

Precautions against Burglary.—One of the duties of the master of every house is to see that it is properly protected against burglary. Carelessness in this respect is a direct inducement to crime. He should make a nightly inspection of the premises, and, if any precaution has been neglected, the matter should be put right at once.

All outhouses should be locked up at dusk, as tramps often take a night's lodging in them; and if there are ladders each should be in its proper place, padlocked if possible. It is advisable to have doors on the basement floor not merely locked, but also fastened by means of bars. Doors of unoccupied rooms should be locked, and the shutters of the windows, if there are any, should be secured. Ordinary catches are apt to fail at critical moments, as they can be opened from the outside unless the shutters close very tightly and are properly tongued.

Windows looking on to a balcony or over a verandah ought to be securely fastened. It is advisable that they should be provided with shutters, for nothing is easier than to cut out a pane of glass. Should the house be either semi-detached or situated in a terrace, the access from above should be carefully inspected, as an entrance is often effected from another house, possibly empty at the time, by means of the roof.

It is never wise to leave money or jewellery lying about on dressing-tables; if it cannot be kept in a safe it should at least be put out of sight.

Burglaries generally take place when there is company at dinner in the evening, when everyone is more or less engaged, and the upper part of the house quiet. They are, as a rule, planned beforehand, after it has been ascertained that "the game is worth the candle". Servants should therefore be warned not to give information to strangers, and locking up at night should be a habitual practice.

A small indoor dog is a great safeguard, from its habit of barking at the slightest noise. Bells fastened on the inner sides of doors at night form an excellent safeguard. On hearing one ring, the burglar is likely to conclude that the game is up, and to depart. It should never be forgotten that a burglar is a coward. The best weapon to use against him is a life-preserver (fig. 345). If stunned by a blow on the head, he may be secured before he can do any damage.

As burglaries are frequently concocted within the house as well as without, it is important to engage respectable servants. The character

of the young men they consort with should also be inquired into, for it is by "keeping company" that many a burglar has gained all the information he required for his purpose.

When a burglary has been committed, the first step to be taken is to inform the police at once of any theft, as the chances are that the thieves will have made off on being disturbed. Here a bicycle will be of great

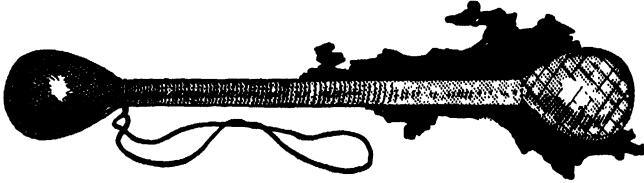


Fig. 345. —Life-preserver.

service, as time is everything, to give the earliest information. Nothing should be disarranged, nor should the ground round the house be walked upon until the premises have been examined by the police.

Inspection of the Garden.—The management of the garden has already (in vol. iii) been dealt with at some length, but there are some masters who take very little interest in fruit, flowers, or vegetables, and know practically nothing about the subject. A few hints may perhaps enable them to exercise some supervision, for even with the best of gardeners this is essential, if only to show them that they are not entirely neglected. Both kitchen and flower gardens should be visited once a day, either in the morning or in the evening, whichever may be the more convenient, and during these visits the master should be accompanied by his gardener. Future work can then be arranged and past work commented upon if necessary.

It is only possible to mention generally a few of the special points which should be noticed. The paths should, of course, be kept clear of weeds. They require sweeping frequently when the leaves are falling in late autumn, and about once a week at other seasons. The oftener they are rolled the better, especially after rain. The lawn should be cut and trimmed at least once a week in the spring and summer, and twice a week if the season is wet. The beds should always be occupied by plants in succession, and kept scrupulously clean.

Frames and glass houses must always be weather-tight, painted periodically, and kept well-ventilated. Water-pipes require occasional examination, and the thermometer should be registered daily. The expenditure of fuel can be economized by careful supervision and by a proper system of firing. While fruit-trees in the houses are in bearing, a reckoning should be kept of the amount of fruit growing after the necessary thinning has been performed.

Fences and hedges require to be clipped when they grow ragged, and all gaps should be filled up either in autumn or in spring. Care should be taken that the bottoms of the fences are kept free from weeds, and that extraneous growth is destroyed.

Fruit-trees should be pruned and thinned so as to give plenty of light and air. They must be sprayed if insects appear on them. Root-pruning is beneficial to barren trees, and the ground round them should be well forked.

By methodical inspection the habit of estimating the amount of fruit grown on each tree is easily acquired.

In the kitchen-garden, perhaps more even than in the flower-garden, supervision is necessary. All the ground should be fully occupied, or

planned out, and an ample supply and proper succession of vegetables should be grown. When one sort is consumed the ground should be at once prepared for the next crop. All weeds and refuse ought to be burned; there should be no waste, the ashes being utilized for lightening the soil. Pea and bean sticks should be stored for use during the following year. It is advisable, if possible, to have manure placed under cover until wanted; if it is kept in an untidy

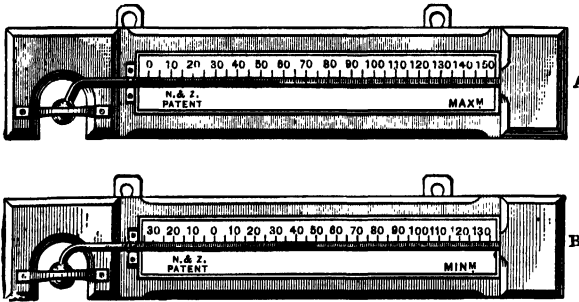


Fig. 346.—Thermometers for use in Glass Houses, &c. A, Maximum Thermometer; B, Minimum Thermometer (both by Negretti and Zambra).

In A there is a small steel rod in front of the mercury. When the temperature rises the rod is pushed forward by the mercury, but as the latter recedes with the cold, the index is left at the *maximum* point which has been attained.

In B, spirits of wine is the fluid employed, and the index is of glass. The spirit, on contracting with cold, draws the index along with it; but on expanding with heat passes freely up the tube without affecting the position of the index, which thus indicates *minimum* temperature since last adjustment.

In reading A, the end of the index *nearest* the bulb must be taken; in B, the end *farthest* from the bulb.

heap in the garden its fertilizing properties will be washed out by rain. Every care should be taken of all tools and implements. They should on no account be left about the garden, but should always be kept in the tool-house.

A thoroughly honest and capable gardener is a treasure, but unfortunately a man of this sort is not easy to obtain, except at very high wages, and others are often exceedingly trying. There is the dishonest gardener, who disposes of the early vegetables; the incapable gardener, who professes the fullest knowledge of his business and promptly hoes up the choicest plants and hacks down the most valuable shrubs; the lazy gardener, who is always gossiping with the maids or sits on his barrow watching the weeds grow; the masterful gardener (and he is the one who quickly detects any want of knowledge in his superiors), who assumes full proprietary rights and resents all interference; besides many other types. Some are hopeless, and the only thing to be done on discovering their real character is to discharge them. Others, however, especially if they are young, may only require kind and judicious treatment to turn them into valuable servants, for with gardeners, as with others, it often is the master that makes the

man. For this reason, though perpetual interference should always be avoided, it is necessary to insist strongly upon the need of supervision.

Inspection of Stables.—Many owners of horses are quite indifferent to the care and management of them. As long as their horses are ready to be driven or ridden, and appear to be properly groomed, they do not give themselves further trouble in the matter. Regarded merely from the standpoint of economy, this is a serious mistake, but if viewed from higher ground it becomes a breach of trust. For everyone who takes upon himself the charge of any animal is bound to see personally that its comfort is not neglected, and the duty is not one which can be thrust on anybody else.

Coming to details: care should be taken to see that the stables have plenty of light and air, that the top ventilators are open and the bottom ones not plugged up with litter. Stablemen are very fond of stopping up ventilators with straw in the winter, the result being to render the atmosphere unwholesome. It is an economy to have the bedding well shaken out and spread in the yard in fine weather. Peat moss, when used, should be carefully raked over, and the droppings removed. This litter is cheaper than straw, but it should not be swept over the gratings, as it is apt to clog the drain-pipes.

A visit should be paid to the stables at uncertain hours, and always after a long day, to see that the horses have been dressed and bedded down for the night, that they have been properly fed, and that all seems comfortable. If the inspection is not at feeding hour, ascertain that the manger is empty, and that the head collar chain runs freely so that there may be no danger of "hanging-up". Throw the clothing back, and run the hand over the hind quarters and the neck to see that the skin is clean and that no appearance of grease can be detected. There should be no scurf on the mane or tail. This can all be prevented by proper grooming, brushing and stropping with a wisp of hay, which creates a good circulation of the blood and a healthy state of the skin, producing a nice glossy coat. Chaff should always be mixed with every feed, and long hay placed in the rack at night. The position of the hay-rack is best on a line with the manger. If it is overhead, the animal, in its endeavour to procure the food, is very apt to get the seeds of the hay into its eyes and nostrils.

Be most particular that any apparent sickness or want of appetite is reported at once, and that no medicine is given without orders. Green food during the summer is beneficial, and carrots occasionally are excellent for the blood. A bran mash should be given every Saturday night, and the feet stopped with cow dung.

Clipping should be done periodically or whenever necessary. Horses should be taken down to the forge, for the purpose of being shod, once a month. This should never be done in the stable, as nails are apt to be left about carelessly, and if trodden upon they often cause an injury which is very troublesome to cure.

Sunday is a good day to make a thorough inspection, when everything must be in its place and spick and span. On this day the straw of the

bedding should be plaited in rear of the stall to give a smart and tidy appearance. All windows and walls ought to be clean, and the harness should be in its place in the harness-room. If this visit is paid regularly, the coachman or groom is compelled to have the place in order by Saturday night.

The coach-house should always be kept perfectly clear for the purpose assigned to it, and not lumbered up with all sorts of things which grooms are so very fond of putting away in corners. Carriages must always be washed and cleaned before being run into the house, especially during a hard frost, otherwise the paint will be injured. Wheels should every now and then be removed, and axle-boxes oiled periodically. Cushions and mats must be kept free from dust, and frequently brushed. Lamps need special attention. Carriages not in constant use should be brought out into the yard once a week on fine days and thoroughly aired. The house should be swept out weekly, the walls brushed down, and the windows cleaned.

The stove in the harness-room should be lighted in damp weather. The walls, if not panelled, should have baize fastened on them about eight or nine feet from the floor. A case with a glass front should be fixed up to hold the bits, stirrup-irons, and all steel work. Reins and traces ought to be pliable, well dubbed and softened before being rubbed up. Everything should always be in its place here, bright, clean, and ready for immediate use. A table will be required for cleaning purposes.

If there is a loft, the trusses of hay should be placed on one side and the straw on the other. A forage store, which need not be large, is preferable, can be kept cleaner, and is better adapted to hold all the food required for consumption for a long period. A chaff-cutter should be kept here, and a corn-bin with a lid and lock in the stable. A daily ration of oats and hay should be fixed upon, and a careful account kept of the expenditure. If only ordinary supervision by the master is exercised, it prevents dishonesty on the part of his man, and instils care and economy in the disposal of food. All outer doors should have locks, and be locked at nights, a duplicate key being in the possession of the master. (See also "Driving", vol. v.)

Dogs in kennels outside should not be left to the care of servants. Regular supervision of the state of the kennels, the supply of straw, the food and water, should be made, also arrangements for exercise.

Inspection of Water Fittings and Sanitary Arrangements.—Another of the master's duties is the periodical inspection of the water supply and of all sanitary arrangements.

All cisterns should be kept covered to prevent contamination of the water, and at the approach of frost they should be protected by means of old carpet or sacking. For wrapping up exposed pipes, straw or hay bands or even paper may be employed. Pipes as well as cisterns should be cleaned out at intervals; otherwise they are liable to get blocked with leaves or birds' nests, in which case the overflow may cause considerable damage. It is advisable to examine all taps and ball-cocks occasionally, for the latter sometimes refuse to act at awkward moments, while the former often

get into a state of perpetual drip, especially when they have been roughly handled by servants. If the defects cannot be remedied in the manner described under "Household Repairs", a plumber should be sent for. All such matters should be attended to as soon as noticed. See vol. i., pp. 1-18.

CARVING.

The present fashion of serving dinners is copied from the Russian. The joints are never placed on the table itself, but are carved at a sideboard or adjoining table. In the ordinary family circle, however, where this fashion is not adopted, a knowledge of the art of carving is still indispensable.

There are some things to be remembered in order to make the carver's task easy and effectual before even using the knife. Every joint should be placed on a dish sufficiently large to allow it to be turned, if necessary, without moving the dish from its position. It should be neither too near nor yet too far away, or much power will be lost. What could be done with ease if it were in its proper place, is performed ungracefully and with difficulty when it is out of position.

Ham, veal, and beef should be cut in very thin slices; while pork, lamb, and mutton should be cut somewhat thicker. The carver ought to be fully acquainted with the choice parts of each kind of joint, so that he may be able to distribute them fairly.

Another point in carving is to retain the gravy as much as possible. Some of it must, of course, escape; the thing to avoid is hacking and chopping, which results in a dish full of gravy, and dry insipid slices. Bad carving is also wasteful, because fewer persons can be served. Meat has a better flavour when nicely cut, and can be brought to table again as a joint if not spoilt on its first appearance. The knife used for carving must be light, sharp, and of a convenient size.

The illustrations show the methods of carving generally adopted but it ought to be mentioned that many authorities adopt other methods, which they deem to be more advantageous. An experienced carver will soon be able to form a judgment upon the particular joint before him, and cut it accordingly. With a right understanding of the general principles, and a fair amount of practice, no one should have any excuse for carving badly.

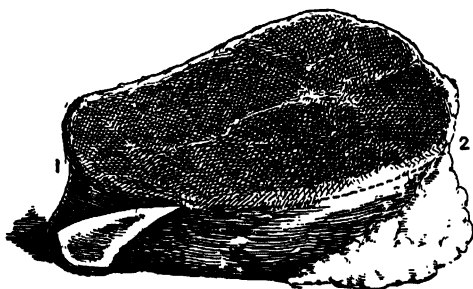


Fig. 347.—Aitchbone of Beef.

Aitchbone of Beef.—As the aitchbone of beef is a very simple joint to carve it is a good one to begin with. Cut across the grain in the direction

of the dotted line 1 to 2 (fig. 347), and serve in thin, even slices. The fat should be taken from the side of the joint.



Fig. 348.—Sirloin of Beef.

When serving the under-cut, remove the superfluous fat, which will be useful for puddings, and cut the slices transversely, as indicated by the



Fig. 349.—Ribs of Beef.

upper part of the sirloin, *i.e.*, by cutting thin slices from end to end (1 to 2). The carving will be considerably facilitated if a sharp knife is run along

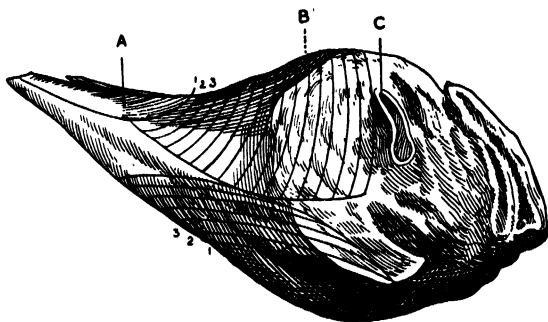


Fig. 350.—Leg of Mutton.

Sirloin of Beef.—A sirloin (fig. 348) should be divided into thin slices with a sharp, firm cut from end to end of the joint on the upper portion (A B to C). Then use the point of the knife to loosen the slices from the bone. They should be fairly and cleanly cut from end to end in order that each person may get a proper proportion of lean and fat. If extra fat is required it can be taken from the under-cut.

lines H. If the joint has to last two or more days it is advisable to use the under-cut (or fillet) hot on the first day; then, by trimming away the projecting bone, the top portion will have the appearance of an entire joint upon next day's table.

Ribs of Beef.—Ribs (fig. 349) should be carved in the same way as the upper part of the sirloin, *i.e.*, by cutting thin slices from end to end (1 to 2). The carving will be considerably facilitated if a sharp knife is run along between the meat and the ribs, so that the slices may be disengaged without trouble. The dotted line A shows a portion that may very well be removed and kept for boiling or stewing, as it is apt to be overdone before the thicker part of the joint is sufficiently cooked.

Leg of Mutton.—The simplest way to carve a leg of mutton (fig. 350) is to take hold of the bone end with the left hand—it should be furnished with a paper frill for this purpose—and cut the

portion marked A with a firm stroke of the knife; next make a sharp incision down to the bone at B. Cut slender slices from A to C, and loosen the slices from the bone. Then turn the leg and cut the under portion in the same manner. It is sometimes carved in slices straight across, beginning at the thick end, but this is not an economical plan and does not divide the meat fairly. The slice containing the kernel and piece of fat called the "pope's eye" (C) is considered the choicest.

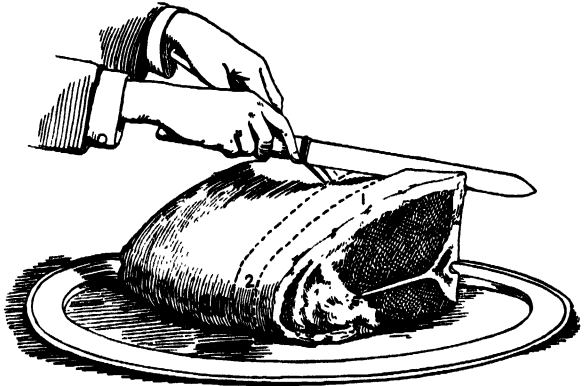


Fig. 351.—Loin of Mutton.

Loin of Mutton.—To carve a loin of mutton (fig. 351) requires but little practice; indeed, the elements of success may be said to lie with the butcher, as it should be carefully jointed before being cooked. This knack of jointing requires a certain amount of dexterity which is possessed by few except butchers. A clumsy attempt to divide any of the bones and joints with a chopper usually results in very little more than a mass of splintered bones, and renders the carving awkward. The point of the knife should be inserted at 1, and after feeling the way between the bones, it should be drawn sharply in the direction of the dotted line to 2. When helping the guests, the carver should ask if anyone has a preference for the outside chop, as some have, while others do not like it. Should the kidney be on the joint when it comes to table, a small portion should be placed on each of the plates till the whole is exhausted.

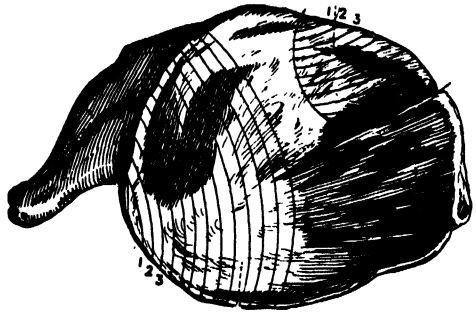


Fig. 352.—Shoulder of Mutton.

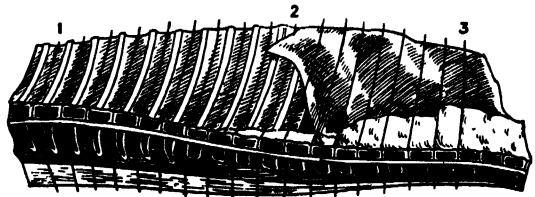


Fig. 353.—Neck of Veal or Mutton.

Shoulder of Mutton.—The illustration (fig. 352)

shows the under side of a shoulder, but it is usually sent to table the reverse side uppermost. Cut the slices as shown, serving a slice from both portions to each guest. The knife should in each case go right through to

the bone. Then turn the joint over and carve slices the whole length of the shoulder from the knuckle. The under part of the shoulder is considered the tenderest and most delicate, although somewhat coarser in the grain than the upper part.

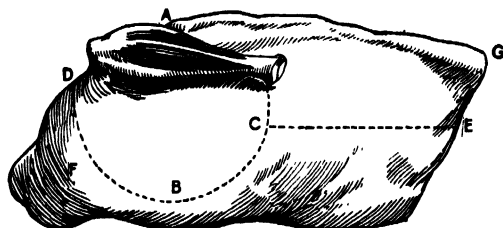


Fig. 354.—Fore-Quarter of Lamb.

Pass the knife under the shoulder in the direction of A C B D (fig. 354), so as to separate it from the ribs without cutting too much meat off the bones, and carve as shoulder of mutton.

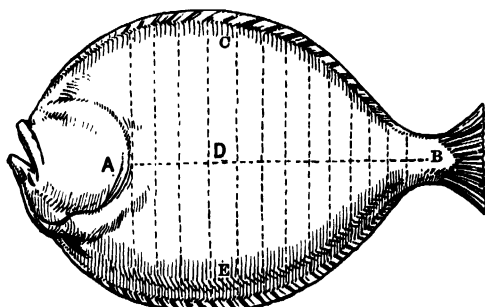


Fig. 355.—Turbot.

regular slices across the fish, shown by C to D and D to E, until all the meat on the upper side is served. The backbone should then be raised and put on one side, the under side being cut like the other. The best parts are

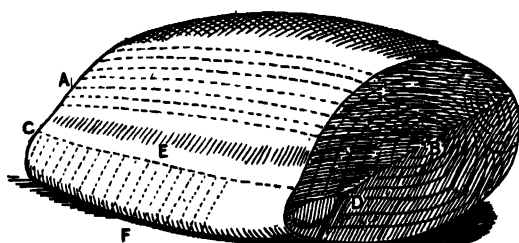


Fig. 356.—Salmon.

along the side of the fish, shown at A to B, and again at C to D (fig. 356). The thick part should then be cut in moderately thick slices, following the direction of A and B; the thin part should be cut downwards from E to F, and a slice of this should accompany a corresponding one of the thick to each guest, for it is in the thin part that the fat of the fish lies. Care

Neck of Veal or Mutton.—

See that the neck is properly jointed before it is cooked. If dished as shown in fig. 353, the carver is saved the trouble of turning his knife about until the opening between the joints is found.

Fore-Quarter of Lamb.—

Divide the ribs from D to E, and then serve the neck (F) and breast (G) as may be chosen. The guests should be asked which portions they prefer.

Turbot.—The best method of serving turbot is shown in fig. 355, the leading cuts being indicated by dotted lines. First, run the fish-slicer down the thickest part of the fish lengthwise, quite through to the bone, indicated by A B; then cut thick, regular slices across the fish, shown by C to D and D to E, until all the meat on the upper side is served. The backbone should then be raised and put on one side, the under side being cut like the other. The best parts are the slices in the middle of the back; and the rich gelatinous skin of the fish and the thick part of the fins are esteemed dainty morsels.

Brill.—This is served in the same manner.

Salmon.—The best way to carve salmon is to run the knife right down to the bone

should be taken that knives or forks composed of steel should not be used in carving this delicate fish. They should be either silver or electro-plated.

Chicken or Capon.—Remove the legs and wings (fig. 357)—they will readily come apart if the bird is a young one—then take off the merry-thought and the neck bones. Next separate the breast from the body by cutting through the tender ribs close to the breast, quite down to the tail. Turn the fowl back upwards, put the knife into the bone midway between the neck and the rump, and on raising the lower end it will separate readily. Turn the rump from you and take off the two side bones. The breast and wings are considered the best parts. Give part of the liver with each wing, and stuffing to all unless objected to.

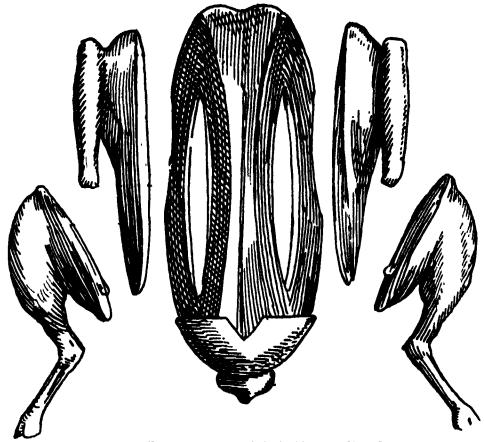


Fig. 357.—Method of Jointing a Fowl.

Duck.—If the bird is a young one it may be carved like a fowl. If, however, it is large, slices should be cut from the breast as shown in fig. 358, commencing close to the wing and proceeding upwards to the breast-bone. The wings and legs may then be removed as with a fowl. But as the legs of a duck are placed farther back than those of a fowl, the thigh-bones will be found considerably nearer the backbone than in a chicken. To obtain the stuffing make a cut below the breast, as shown by dotted line A, and insert the spoon.

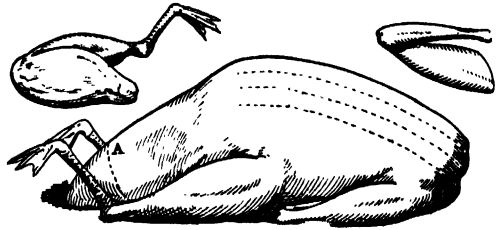


Fig. 358.—Duck.

Goose.—Stick the fork into the centre of the breast, hold it firmly, and commence to carve slices from the neck down the breast, as shown in fig. 359. Remove the wings and legs. The back and lower side bones, as well as the two side bones by the wing, may also be served. The best pieces are the breast and thighs.

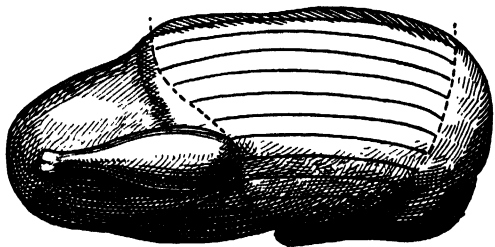


Fig. 359.—Goose.

Turkey.—Cut long slices from each side of the breast down to the ribs,

beginning at A B (fig. 360), from the wing to the breast-bone. The legs may then be removed and the thighs separated from the drum-sticks. The joint of the pinion will be found a little below B, and the wing may then

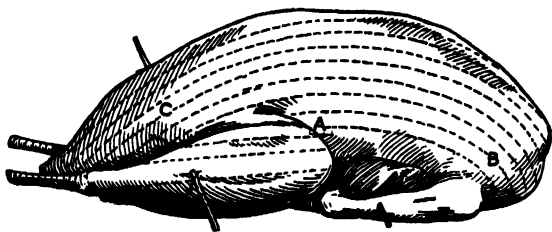


Fig. 360.—Turkey.

be easily removed without touching the leg. The stuffing is usually in the breast; but when truffles, mushrooms, or oysters are used, an opening must be made by cutting a circular incision through the apron at C.

Hare.—Put the point of the knife under the shoulder (B, fig. 361), and so cut down to the rump along the sides of the backbone in the line of B C. The slices should be moderately thick. To separate the legs and shoulders, put the knife

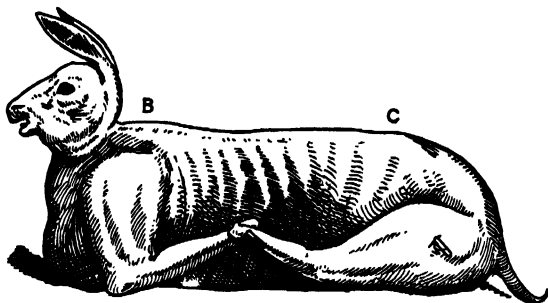


Fig. 361.—Roast Hare.

between the leg and back and give it a little turn inward at the joint. The shoulders may be removed by a circular cut around them. The back is the most delicate part, and next to that, the legs.

much the same way as a hare. Draw the knife down the back on each side of the spine in the direction of 3 and 4 (fig. 362), and cut some slices. Then remove the legs as shown by the line 5 and 6, and afterwards the shoulders, as shown by the line 7 and 8. If the rabbit is young and small, after the removal of the legs and shoulders it may be cut across the back as shown with the dotted line 1 and 2; do this at equal distances, and serve. The shoulders and legs are easily removed

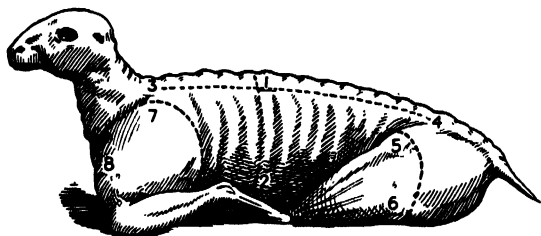


Fig. 362.—Rabbit (roasted).

by placing the knife between them and the trunk and turning them back. The body can then be divided. The stuffing, which should be of the usual veal forcemeat, should be served with each plate. Red-currant jelly should also be on the table.

Rabbit (boiled) (fig. 363).—The legs and shoulders should be first taken

off, and then the back cut across into two parts, which is easily done by placing the knife in the joint and raising up the back with the fork. The back, as in the hare, is the best.

Onion sauce should always be served with it.

Partridges, Woodcocks, &c.

—Put the fork into the breast, cut a slice from the outside, and then cut close along the breast-bone, severing the legs and wings from the carcass. The favourite parts are the wing, breast, thigh, and merry-thought.

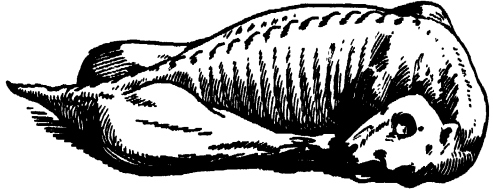


Fig. 363. — Rabbit (boiled).

Wild Duck, Widgeon, &c.—Make two or three incisions, as long slices, into the breast. Have ready a lemon cut in half. Dip one half in salt, and sprinkle the other with cayenne pepper. Squeeze them thoroughly over the breast, and pour over it a glass of hot port wine. The slices and limbs may then be served round.

THE MISTRESS'S DUTIES.

Mistress's Daily Duties.—The extent of the duties of the mistress of the house must be regulated in a great measure by the amount of her husband's income and the corresponding staff of servants at her disposal, as well as by the total number of persons in the household. Method will contribute essentially to the comfort of the home, and will secure the co-operation of the servants when there is much work to do and few of them to do it. Her daily duties should begin with early rising, and if she makes a practice of this when in health, enforced deviation from the rule when illness intervenes will not interfere with the established routine which has become a matter of mechanical observance. In some households it is the practice of the mistress to wake her servants by ringing a bell, but this is unnecessary if she provides them with an alarm clock, and sees personally that they are downstairs at the proper time. If there are children, and she has no nurse, she will need to superintend their toilets before descending to supervise the final preparations for breakfast, and to make the tea or coffee in order that it may be palatable. This particularly applies to households where only a general servant is kept who has to do a certain amount of housemaid's work before breakfast.

After breakfast, which should be punctually served, the mistress should make a tour of inspection to see that the early work has been thoroughly done. She should also help with the bed-making and dusting when such assistance is necessary. She must next inspect the kitchen and review the contents of the larder, deciding how to utilize the various remnants of food, and how to supplement them. This will enable her to draw up a list of the articles to be ordered from the trades-people who call at the house, or to be purchased by herself later in the morning, when she personally inspects the goods while shopping, the latter being the more satisfactory proceeding.

She will usually find it necessary to do a certain amount of cooking herself when she does not keep a cook, or at any rate to prepare the more elaborate dishes, pastry, jellies, and other sweets. If possible, this should be done early in the morning, previous to shopping.

After such culinary duties have been performed and directions for the day's work have been issued to the servant or servants, the interval before mid-day dinner or luncheon may be spent in shopping, letter-writing, sewing, and other miscellaneous occupations. Freshly-cut flowers should be placed in vases and glasses in the various rooms, while sickly plants should be returned to garden or greenhouse and replaced by others. Pet

animals, birds and poultry, require attention, best bestowed during the morning at a stated time. Circumstances must determine the best method to ensure that nothing is neglected.

The serving of dinner or luncheon may require the supervision of the mistress where a servant is not efficient. After the meal she can prepare for paying or receiving calls and taking part in social functions. Tea, high tea, or dinner will next entail her attention, in order that it may be properly placed upon the table, and the evening will be devoted to entertaining or being entertained, or to the amusements of the family circle.

If a mistress does not see that her servants always retire for the night at a reasonably early hour she cannot expect them to rise at six o'clock in the morning.

Mistress's Weekly Duties.—Every week it is necessary to inspect all garments and household linen before despatching them to the laundry, and to repair temporarily any rents which might become worse during the processes of washing and "getting-up". On their return at the close of the week the things must be compared with the list sent, and again passed in review and mended as required. A fresh set should be distributed throughout the household each week, including such articles as kitchen-cloths and dusters, to take the place of those which are being washed; the clean set may be conveniently given out on Saturday, so that all may be ready for Sunday use. It is a good plan to set apart one day a week for mending and renovations of all sorts, when breakages of china, ornaments, and furniture can also be repaired by the use of a little gum or cement.

The daily account of expenses must also be made up at the close of each week for entry in the housekeeping book. Tradesmen's accounts should be regularly paid on the arranged day.

There should also be a weekly examination of the store cupboard, when supplies should be given out for household use and deficiencies noted, that they may be made good when the next order is given.

Mistress's Duties at Longer Periods.—At each change of season during the year the mistress of the house will have to devote a little time and thought to effecting the corresponding changes in the outfit of house and family. Spring and autumn cleaning will necessitate more than supervision on her part, in order that all operations may be thorough and effectual. Curtains and draperies have to be cleaned and put away, their places being filled by others more suitable. There should also be a thorough overhauling of the linen and china cupboards once a quarter, all losses being made good, or at least noted in the list. Various articles of clothing periodically require inspecting, mending, washing, and storing; seasonable substitutes may have to be bought, or planned out with a view to making them at home.

When servants are engaged by the month their wages should be paid on a fixed date. Accounts again need attention, and monthly payments have to be made where such arrangements exist with tradesmen. Papers dealing

with rates and taxes, gas, pew-rents, and statements of a like nature must be noted and filed for settlement at the proper time; doctors' or school bills must not be neglected, all amounts paid being duly entered in the ledger devoted to that purpose. A term's notice is usually expected when a child is to be removed from a school.

There should be a periodical turning-out of drawers and cupboards, in order that no accumulations of useless material may exist. The best manner of treating such articles is described in the section on "Household Economy" (vol. iii.).

Orders for the Day.—In giving orders for the day it is imperative that there should be a clear understanding between mistress and servant as to the duties to be performed by the latter, and the way in which the work is to be done. Every housewife has her special methods, and if she clearly indicates them to her servant and gives a practical demonstration of them once for all, a maid who is worth keeping will carry out her wishes, and thus constant fault-finding will be unnecessary. Overlooking slipshod work soon causes even a moderately capable servant to become an encumbrance, whereas judicious blame or praise bestowed when merited from the beginning of a new-comer's career tends to produce a helpful worker who can be trusted. In order that the excuse of forgetfulness may be impossible, it is advisable to have a tabular list of the daily work drawn up and hung in the kitchen, particularly in households where only a general servant is kept and there is little or no outside assistance. Such a servant should, however, have some specified work to do each day, consisting chiefly of the rougher kind of house-cleaning and plain cooking, while the mistress undertakes the lighter portions, such as bed-making, preparing rooms for sweeping and cleaning, replacing the ornaments afterwards, dusting, pastry-making, and cleaning the best silver and plate.

Nothing should be allowed to be ordered except by the mistress personally, or by her through the cook, who should have slate and pencil and should write down all orders. Each day the necessities ordered must be entered in a book for comparison with the accounts sent in by tradesmen, so that an accurate statement is kept of all goods received and the date of each transaction. The weight of a joint should be verified by the cook on its arrival, and a ticket should accompany it when sent by the butcher.

The Keeping of Accounts.—The mistress of the house should keep an accurate account of all current expenses, and periodically examine and balance them. Everything bought or received during the day should be noted in a memorandum-book at the time and entered in the family account-book at the end of each week. It is a mistake to trust to memory when recording at the close of the day each item for which payment has been or will have to be made; something is sure to be overlooked. In households where a cook is kept it is advisable to give her a certain sum of money daily, requiring her to put down on slate or paper all she pays for, and settling up with her each night or succeeding morning, allotting a further sum for a similar outlay.

		Sunday.			Monday.		
Balance on hand	...	0	12	9	...		
Received	...	5	0	0	...		
Paid as follows:							
Butcher	...				0	2	6
Baker	...				0	0	8
Fish	...				0	2	0
Dairy Produce	...	0	0	8	0	0	8
Green-grocer	...				0	0	8
Coal, &c.	...				0	5	6
Groceries	...				0	1	4
Rent, Rates, and Taxes	...						
Wages	...						
Laundry	...						
Miscellaneous	...						
Daily Totals	...	0	0	8	0	16	4

At the end of the month, enter in the second book (No. II.)
When all the spaces are filled up

	January.			February.			March.			April.			Ma	
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	
Balance on hand	0	12	9	...			...			...
Received	20	0	0	20	0	0	20	0	0	20	0	0	20	
Paid as follows:														
Butcher	3	3	8		4	0	2	19	3	3	2	0	3	
Baker...	0	18	8	1	3	0	0	19	3	1	2	0	1	
Fish	1	10	0	1	5	0	1	7	3	1	3	6	1	
Dairy Produce	1	5	4	1	3	0	0	19	3	1	1	0	1	
Green-grocer...	1	0	0	0	19	6	1	1	3	0	16	8	0	1
Coal, &c.	1	2	0	1	0	0	1	1	3	0	19	6	0	1
Groceries	2	10	0	2	5	6	2	10	0	2	3	6	2	
Rent, Rates, and Taxes	4	8	0	4	8	0	4	8	0	4	8	0	4	
Wages	1	6	0	1	6	0	1	6	0	1	6	0	1	
Laundry	0	18	0	0	18	6	0	17	6	0	18	6	0	1
Miscellaneous	0	10	0	0	12	6	0	10	6	0	10	0	0	1
Monthly Totals	18	11	8	18	5	0	18	1	0	17	10	8	17	

AND EXPENSES

KLY COMBINED.

y.	Thursday.	Friday.	Saturday.	WEEKLY TOTALS.					
				PAID.			RECEIVED.		
	0	4	0	0	2	6	0	5	6
2	0	0	2	0	0	2	0	1	4
4	..	..	0	1	2	0	0	6	0
2	0	0	10	0	0	2	0	1	2
6	0	0	4	0	0	2	0	1	4
	..	..	..	..	..	..	0	5	6
9	0	1	6	0	2	4	0	0	11
	..	..	..	..	..	1	2	0	1
	..	..	..	..	..	0	6	6	0
	..	..	..	..	..	0	4	6	0
	..	..	..	..	..	0	2	6	0
1	0	7	4	0	8	0	2	6	3
							4	13	10

Leaving a balance on hand of £0 18 11

wing manner all sums received and spent on the above headings.
l be a record of the year's expenditure.

EARLY COMBINED.

July.	August.	September.	October.	November.	December.	YEARLY TOTALS.													
						PAID.						RECEIVED.							
						£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.		
							
		20	0	0	20	0	0	20	0	0	20	0	0			240	0	0	
																240	12	9	
	1	2	19	6	3	2	6	3	3	8	3	2	6	37	2	10			
		1	1	0	1	2	6	1	3	0	1	2	6	12	17	8			
1	0	1	3	0	1	4	6	1	2	0	1	3	6	14	13	0			
1	0	0	18	6	1	1	0	1	1	6	1	2	0	12	11	4			
17	6	0	18	6	1	1	0	1	0	0	1	1	6	11	4	4			
17	6	0	18	6	0	19	6	1	0	0	1	1	6	11	18	0			
2	0	2	1	6	2	3	0	2	2	6	2	4	0	26	7	0			
8	0	4	8	0	4	8	0	4	8	0	4	8	0	52	16	0			
6	0	1	6	0	1	6	0	1	6	0	1	6	0	15	12	0			
18	6	0	18	6	0	17	6	0	18	0	0	18	0	10	16	0			
10	6	0	10	0	0	12	0	0	12	6	0	10	6	6	13	6			
11	0	17	1	10	17	5	0	17	17	6	17	18	8	18	0	6	212	11	8
																	212	11	8

Leaving a balance on hand of £28 1 1

The account-books should be two in number:—(1) Daily and weekly combined, and (2) Monthly and yearly combined. Printed books may be bought ruled and classified as to the various items of expenditure, but plain ones carefully ruled will suffice. A glance at the annexed forms will show how they should be kept. The figures employed are merely offered as an example, and are supposed to refer to a family of three with an income of £300 per annum. On the left-hand side should be entered the money received and on the right the outlay made. Sundries should be accounted for in the daily memorandum-book, and should be classified as carefully as possible. The various items should be added up at the close of the week, and the total subtracted from the amount received. The balance in hand may be added to the sum received for the following week's expenses, or, together with the remainder of the income, be applied to clothing, education, travelling, insurance, &c. The various weekly totals should be added up at the end of each month and entered in the second book, which should be balanced at the end of the year.

Cash v. Credit.—The advantages of cash payments are unmistakable. Not only does the practice of running a credit account tempt the housewife to buy more than she otherwise would do, but also in many cases it entails the payment of higher prices than would be charged for goods sold for ready money. It necessitates constant watchfulness in order that no mistakes or false entries may be made by the tradesman to the disadvantage of his customer with regard to the weight and quality of articles supplied. The credit system gives dishonest servants opportunities of ordering things and getting them entered in the current account, and delinquencies of this kind will speedily swell the total. As mentioned in the section on "Household Economy", a clear understanding with tradesmen as to the nature of goods preferred, and the assurance that payment will be made on or before delivery, will prove a check on any tendency to overcharge; they soon find out that they must supply the weight ordered and no more, and that as they are not kept waiting for their money prices must be fair and reasonable.

Weekly or Monthly Payments.—Whenever possible weekly payments are preferable, as the books can be made up more easily; there are fewer items to check, and one can estimate more readily the present state of expenditure. In small households and in town this plan should be pursued; it saves time, trouble, and expense. If extensive supplies have to be ordered, as in villages where orders are sent to large firms of repute, monthly payments are necessarily more convenient. Tradesmen will always be found willing to allow discount for regular weekly payments.

The Checking of Bills.—All bills received should be carefully kept, and the various items verified. No payment should be made before this has been done, as mistakes are of frequent occurrence, even with tradesmen of undoubted integrity. Several files should be kept for bills, which should be methodically placed thereon, after settlement, for future reference. Occasionally a bill is presented for payment a second time, and unless the

customer can produce the receipted document, she will probably have to pay it again. All receipts should therefore be filed in such order as will allow of ready discovery. Weight tickets sent with butcher's meat, coals, and other goods must be retained and compared with the bill when it is received. The cost of a joint should be carefully reckoned according to the price per pound charged by the butcher.

Practical Hints on Shopping.—Whenever it is possible for the mistress to do her own marketing, much saving can be effected. There is often a glut of fish, fruit, or vegetables in the market, which lowers their price considerably. Personal marketing also brings under the eye of the housewife food which would otherwise be overlooked by her, and thereby affords the possibility of greater variety in the menu. When marketing it is advisable to take thought for the morrow, as during the week one can sometimes buy cheaply what will cost more on Saturday.

The state of the weather exercises a considerable influence on the price of perishable provisions. Poulterers sell game and poultry very cheap at the close of a week of mild, muggy weather. Prices vary in different localities, and it is only by personal observation that one can ascertain which are the best shops for various articles, and what is a fair price to pay. It must, however, be borne in mind that these economies apply only to purchases that can be made without the expenditure of valuable time or money in journeys.

One thing to remember when marketing is that the "best is cheapest". You can buy butter for 9*d.* per lb.: you can also spend twice that amount. It will be found economical to do this, for uneatable butter at 9*d.* is dearer than a good quality at 1*s.* 6*d.* The same reasoning applies to eggs, meat, tea, or anything else. Avoid attempting to economize in the quality of purchases: in their quantity, however, strive to effect as much saving as possible. At the same time, do not go to the other extreme, and imagine, like so many young wives, that nothing can be good unless a high price is paid for it. Food is not necessarily bad because it is cheap. Another thing to remember is that perishable goods—such as fish, fruit, and vegetables,—which are always intended for immediate consumption, should be purchased in small quantities. With dry goods—candles, soap, &c.—the case is different: these, if of good quality, will improve by keeping. The winter stock of coals should always be obtained in summer, and stored until required. There is a difference of several shillings per ton between the prices charged in July and in December.

Hints on the purchase of meat, fish, game, butter, and milk are given in the section on "The Larder" (vol. ii.); but one or two articles of food, such as fruit, vegetables, and groceries, may be conveniently dealt with here.

Vegetables.—These should be fresh-looking and crisp, free from yellow leaves and other indications of staleness. Cabbages and lettuces should be chosen for their compact centres or "hearts" rather than for abundance of leaves. The cheapest potatoes are often waxy and flavourless when cooked. Kidney or regent's potatoes are usually to be relied on, and may be bought

more cheaply by the sack, for storage in a dark, dry place. Cauliflowers should be close and white in appearance. Artichokes, asparagus, and sea-kale usually command a high price, but occasionally it is possible to secure the first two pretty cheaply late in the season. There is a good deal of difference in the varieties of peas sold, garden peas being much sweeter and softer than field peas, which are in many cases hard and tasteless. The pods of the latter are very large and well filled. Freshly cut cucumbers are stiff and firm; if they are limp they are stale. Radishes should be small and solid; the larger ones are often hollow and spongy, with a tough exterior. Mushrooms cannot be too fresh for use; it is not advisable to buy those that have been in stock a day or two. Small specimens of parsnips, beetroot, and carrots are preferable to large ones, which are likely to be tough.

Fruit.—All fruit should be bought with due regard to its freshness, soundness, and size; when damaged it is more or less unwholesome. Cooking apples should be heavy and of large size, as the higher price per pound paid for the finer specimens is justified by the small amount of waste when paring and coring them. Pears should be free from bruises and not over-ripe, or they will be mealy and unsound at the core. The best cherries for cooking are the Kentish, distinguishable by their bright colour and sharp flavour. Morella cherries, used in making cherry brandy, are dark and bitter. Melons, when ripe, will give way slightly if pressed with the finger at one end; the shopkeeper will always test them in this way if asked. Foreign apricots may be bought cheaply for about one week at mid-summer. Seville oranges for marmalade are cheapest about the beginning of March, and fine fruit is economical, as it contains more pulp and flavour than the inferior varieties.

Groceries and General Stores.—Groceries should be bought in large quantities when possible, and whenever prices fall advantage should be taken of the opportunity to lay in a stock. It is, however, better not to have too large a supply of such articles as rice, sago, &c., which must be kept in tins or bottles closely covered. Coffee should be bought whole, and freshly ground at home for each meal. Cheap sugar should be avoided. The best moist sugar is bright and crystalline, not sandy looking, while the best loaf is close and sparkling and of a good white colour. Good tea can be bought much more cheaply if a chest or a half chest is taken, but it must be portioned out carefully, or the economy will be small. Soda should be bought in large quantities, also soap, which can be cut up and stocked in a dry cupboard to harden. A fair price should be paid, as the cheap soaps contain a large amount of alkali. Highly coloured and scented toilet soaps should be avoided, as these characteristics usually conceal defects, particularly in cheap makes. Plain biscuits should be bought by the tin. Matches of good quality are to be preferred, and may be bought by the dozen boxes or packet. Where it can be stored, flour should be bought by the stone, peck, or sack. Eggs, if procured when plentiful, can be preserved for winter use. It is a mistake to buy very cheap eggs for

cooking, as they are usually of inferior size and quality, and include many which have to be rejected.

Butter of the best quality should be secured for table use, and if slightly salt it will keep better. A cheaper article will serve for culinary purposes, though it should be good of its kind. Lard should always be the best obtainable. Milk in towns must not be judged by its colour, but by its quality, and by the amount of cream that rises to the top after the milk has stood for a time.

Drapery and Clothing.—When making purchases of this class of goods, it is a golden rule to aim at securing quality of material, and experience alone will show the young housekeeper where she can be best served with full value for her money. Shopping done in haste is usually repented of at leisure; deliberation goes a long way towards ensuring a satisfactory result.

It will be found that each tradesman has at least one speciality. Gloves, for instance, may be had in greater variety and of better quality at one establishment, lace at another, silks and satins at a third. Experimental visits will show a housekeeper how to distribute her orders. Haberdashery can be bought cheap if taken in quantities—tapes by the dozen or in a bundle of assorted sizes; linen buttons by the set of cards, and so forth. Cheap gloves are a false economy, as they lose shape readily, and are not worth cleaning. It is also a mistake to buy them too small, as they split, and cause the hand to look unsightly. The same remark applies to boots and shoes, which give most satisfaction when made to order. Umbrellas should be chosen for rigidity of frame and for the texture of covering. A soft silk wears out very quickly, but the mixture known as Gloria is particularly serviceable. Extremes of fashion should always be avoided.

Estimates of Expenditure: £200 to £600.—In calculating the annual expenditure it is evident that only average figures can be given, the actual amounts varying considerably according to the extent of income, number in family, and style of living. The items must therefore be varied to suit particular circumstances and conditions of life. Where there are children, the milk bill will necessarily be high; where wine and spirits are consumed a corresponding increase of outlay is inevitable. Game and poultry must be articles of luxury in a family of limited means, while farm produce and vegetables are more expensive in town than in country. Servants' wages vary considerably, town rates being high. Experienced servants with good references can command proportionate remuneration; but promising beginners may often be secured at a much lower rate, and when trained by a little systematic attention on the part of the housewife, should be retained, if possible, by a slight increase in their wages each year. In cases of moderate income and few children a combination of duties may be arranged for, and a nurse-housemaid and a cook-general will suffice if the mistress renders a little help. The same rule applies to men servants, where garden and stable require attention. A handy man can fill up his time by cleaning knives, boots, windows, &c., and thus leave the

maids more time for other duties, particularly when the greater part of the washing has to be done at home, laundry bills being better avoided.

High rents, rates, and taxes cannot be afforded by those with moderate incomes. It is far wiser to economize in this respect than to be straitened in the matter of food and clothing, though occasionally it is possible to secure a bargain as to size or number of rooms by the outlay of a pound or two extra.

ANNUAL EXPENDITURE.

	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Rent, rates, taxes - -	33	0	0	45	0	0	60	0	0	70	0	0	70	0	0
Household bills - -	81	0	0	124	0	0	167	0	0	190	0	0	240	0	0
Wages - - -	16	0	0	30	0	0	40	0	0	50	0	0	60	0	0
Heating, lighting, &c. -	12	0	0	14	0	0	16	0	0	18	0	0	20	0	0
Clothing - - -	30	0	0	35	0	0	45	0	0	50	0	0	60	0	0
Doctor, education, amuse-															
ments, and incidental -	28	0	0	52	0	0	72	0	0	80	0	0	100	0	0
Stable or use of carriage	—			—			—			42	0	0	50	0	0
	<u>£200</u>	<u>0</u>	<u>0</u>	<u>£300</u>	<u>0</u>	<u>0</u>	<u>£400</u>	<u>0</u>	<u>0</u>	<u>£500</u>	<u>0</u>	<u>0</u>	<u>£600</u>	<u>0</u>	<u>0</u>

ANALYSIS OF WEEKLY HOUSEHOLD BILLS.

	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Butcher - - -	0	8	0	0	10	0	0	15	0	1	0	0	1	5	0
Fish - - -	0	2	0	0	3	6	0	4	6	0	5	6	0	6	0
Baker, &c. - - -	0	3	6	0	5	0	0	6	6	0	7	6	0	8	0
Butter and eggs - -	0	2	6	0	6	0	0	7	0	0	8	0	0	10	0
Milk - - -	0	2	0	0	4	0	0	5	0	0	6	0	0	6	6
Fruit and Vegetables -	0	3	0	0	4	6	0	5	0	0	6	0	0	6	6
Grocer - - -	0	6	0	0	8	0	0	10	0	0	12	0	0	14	0
Washing - - -	0	4	0	0	6	0	0	7	0	0	8	0	0	10	0
	<u>£1</u>	<u>11</u>	<u>0</u>	<u>£2</u>	<u>7</u>	<u>0</u>	<u>£3</u>	<u>0</u>	<u>0</u>	<u>£3</u>	<u>13</u>	<u>0</u>	<u>£4</u>	<u>6</u>	<u>0</u>

This average is rather below than above the sum allotted.

THE TOILET

THE COMPLEXION.

Nature of the Skin.—As the health of the body considerably affects the appearance of the skin, so in its turn the treatment of the skin influences health.

In order to understand the hygiene of the skin, it is necessary to know something of dermatology, about which, therefore, it may be as well



Fig. 364.—Structure of the Skin.

A. Horny layer of cuticle, epidermis, or scarf-skin. B. Mucous layer of epidermis, the lower cells of which contain colouring matter. C. Dermis or true skin. D. Layer of fat cells. *a a*, Sweat glands, terminating in pores. *b*, Shaft of a fine hair (the little bags on either side are sebaceous or oil glands).

to say a few words. The two layers of the skin (fig. 364) are known as the cuticle or scarf-skin (epidermis), and the sensitive or true skin (dermis or corium). Sir Erasmus Wilson, in his invaluable work on *The Management of the Skin*, says: "The various tints of colour exhibited by mankind are referrible to the amount of colouring principle contained within the elementary granules of the scarf-skin, and their consequent depth of hue". And he goes on to explain that the colour is dependent upon the energy of the skin's action. "Thus, in the tropics, where light and heat are in excess and the skin is stimulated by these agents to vigorous action, the colour is abundant and intense."

More than anything else cleanliness is of importance for keeping the skin healthy. The truth of this may be the better appreciated when it is remembered that the scarf-skin is constantly rejecting minute

powdery scales which, unless removed, mingle with the natural exhalations of the body, and by incrusting the pores check perspiration. The pores, which are connected with tubes known as perspiratory glands and oil glands, should always be allowed free action. Wash the skin at least twice in twenty-four hours.

Vapour Baths.—Judiciously applied and only occasionally used, the vapour face-bath has great advantages in rendering the complexion fresh



Fig. 365.—A Sweat Gland, highly magnified.

and clear. Whereas the ordinary ablution cleans only the surface of the skin, the steaming process penetrates deeper, and by causing the pores to open and discharge their burdens, frees the skin from impurities.

An easy way of steaming the face is by means of the spirit-kettle, or by holding the face over a bowl of boiling water, at the same time covering the head with a towel which falls outside the bowl, and thus shuts in the steam. The process should last for about ten minutes with brief intervals,

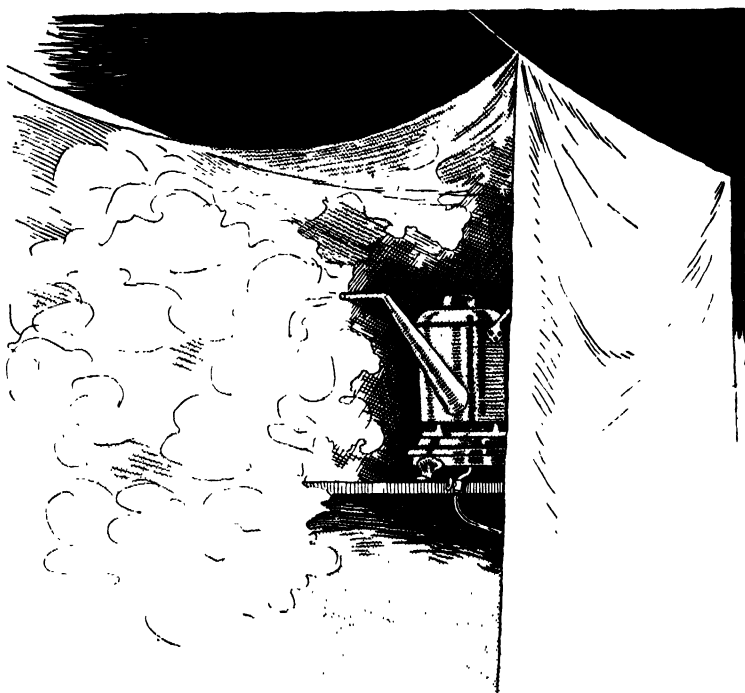


Fig. 366.—Arrangement for Vapour Bath.

and should be followed by brisk friction with a Turkish glove, wetted with a diluted carbolic solution and soaped. Finally, the use of a tonic lotion is advisable to close the distended pores before they act as dust traps. Lemon juice, ammonia-water, or a weak solution of some good brand of eau de Cologne or lavender-water will answer the purpose.

One of the best plans, however, is to have a tin or copper vessel made, somewhat resembling a sauce-pan but more upright and less broad in shape, and having a projecting funnel, handles, and a lid (fig. 366). Set the vessel filled with water upon a lighted gas or spirit stove, and when the water boils sit down before the mouth of the funnel, out of which the vapour passes. In order to receive the full benefit of the vapour, hang a bath-sheet, as shown in the figure, across a couple of lines of cord, fixed from above the stove to about a yard in front of it. This will shut in the

steam. Previously, cream the face charily with an unguent, such as cold cream or honey paste, and hold back the hair with a handkerchief bandage. The cream must not be wiped off until the vapourizer has done its work, which will be in about seven minutes.

Here is a recipe for rose cold cream:—

Oil of almonds, 3 ozs.; fine white wax, $\frac{3}{4}$ oz.; spermaceti, 3 ozs.; distilled rose-water, 3 ozs. Put the oil, wax, and spermaceti in a jar and melt them *au bain-marie*, that is, by standing the jar in a pan of boiling water over a low fire, and while this is warm, add to it the rose-water. Mix the whole, and put the mixture up in a pot.

Cucumber cold cream is made in the same way, substituting cucumber juice for the rose-water. (For honey paste see "The Hands".)

Care of the Complexion.—A dry skin is also benefited by occasional applications of almond oil or olive oil, with which the flesh should be kneaded and cleansed. After wiping off the oil, bathe the face in lukewarm water and dab it with virginal milk, which is nothing more than a mixture of 4 drs. of simple tincture of benzoin and $\frac{1}{2}$ pint of rose-water. This lotion may be used whenever the face feels hot and dry. Almond lotion is also appropriate on such occasions. The ingredients are: Emulsion of bitter almonds, 4 ozs.; rose-water, 3 ozs.; orange-flower water, 3 ozs.; borax, 1 dr.; simple tincture of benzoin, 2 drs.

There is nothing more cooling or softening for the skin than a preparation of almonds or cucumbers.

Facial massage is excellent for keeping the skin supple, firm, and clear. Smear the face with some good unguent, and work it into the skin in circles. This system of shampooing will often cure blemishes.

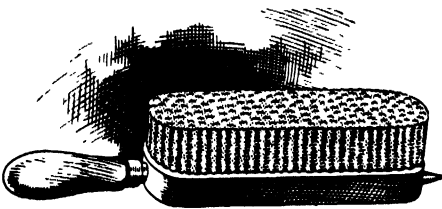


Fig. 367. —Rubber Toilet Brush.

A moist skin looks better for a rub over with a pad of cotton-wool moistened with diluted eau de Cologne.

The use of a rubber complexion-brush (fig. 367) is invaluable for almost any skin, especially after the face has been vapourized.

If the skin is uncomfortably harsh, rub it with an emollient after each ablution. Glycerine and rose-water mixed will also generally be found beneficial, but if glycerine is unsuitable, use either cold cream, cucumber cream, virginal milk, or even pure elder-flower water, with which the face may be bathed with impunity. The water for facial ablutions should be lukewarm.

Abjure the use of carmine, rouges, white-lead, and above all arsenic. The finest cosmetic is rain-water. If this is not easily procurable, at least take care that the water of the wash-stand is soft. Bags of bran or oatmeal put into the pitcher will ensure this.

Horse-radish steeped in milk is a simple cosmetic that may be used frequently.

Food influences the complexion very much. Water-drinkers, as a rule, have complexions of greater purity than those who take wine or beer regularly. The cooler the diet, the better. Take fruit, vegetables, and milk in abundance, but condiments, such as pepper, mustard, and French sauces, have nothing to recommend them except their flavour. Salads containing lettuce and water-cress can scarcely be eaten too freely. The oil of the dressing is also very wholesome.

Soaps.—Opinions differ as to the advisability of using soaps to a tender or sensitive skin; but according to Sir Erasmus Wilson, if we would have health, we must have soap.

“When examined chemically,” he wrote, “the scarf-skin is found to be composed of a substance analogous to dried white of egg, in a word, albumen. Now albumen is soluble in the alkalies, and these are the agents which are commonly employed for purifying the skin. Soap, whatever its specific name, is a compound of the alkali soda with oil, the former being in excess. When used for washing, the excess of alkali combines with the oily fluid with which the skin is naturally bedewed, removes it in the form of an emulsion, and with it a portion of the dirt. Another portion of the alkali softens and dissolves the superficial stratum of the scarf-skin, and, when this is rubbed off, the rest of the dirt disappears. So that every washing of the skin with soap removes the old face of the scarf-skin and leaves a new one; and, were the process repeated to excess, the latter would become so much attenuated as to render the body sensible to a touch too slight to be felt through its ordinary thickness. On the other hand, where the scarf-skin and the dirt are rarely disturbed by soaps, the sensibilities of the skin are necessarily benumbed.”

Of course, there are soaps and soaps; some highly-coloured and objectionable, others pure and good. Palm-oil soap and white-lard unscented soap are among the best. The common yellow soap is also to be recommended. Contact with lavender bags will give it a fragrant perfume.

If soap is objected to, a good substitute will be found in glycerine jelly or purified lard.

Face-Powders.—A beautiful complexion is a gift of nature, and no amount of washes and pastes and expensive cosmetics will produce what health may claim as a natural heritage. The secret of beauty lies in good health. Plenty of fresh-air exercise, careful clothing and diet, early hours, and frequent ablutions will, however, do much to encourage a faultless complexion. That known as sallow or “muddy” is caused by a change in the scarf-skin, which by the production of an excess of pigment is rendered gray and opaque.

A good complexion needs no decorative powder. A piece of chamois skin rubbed over the face will usually take away any appearance of moist heat.

All powders are open to the objection that they choke up the pores

artificially; but if an exceedingly small quantity is used, not much harm will be done, provided the powder be free from poisonous ingredient. The puff should be shaken before it is applied to the face, otherwise it is apt to be overcharged, and a face smothered with powder is very unsightly.

To make a simple rice-powder, steep some rice in a jar of water for three or four days, changing the water daily; then drain the rice, spread it on a clean cloth, and when dry, pound it until it is reduced to a fine powder. Sift it through muslin, and perfume it by putting one or two tonquin beans in it.

The following recipe for violet powder is from Dr. Septimus Piesse's book *The Art of Perfumery*: Wheat starch, 12 lbs.; orris root powder, 2 lbs.; otto of lemon, $\frac{1}{2}$ oz.; otto of bergamot, $\frac{1}{4}$ oz.; otto of cloves, 2 drs. These given quantities can, of course, be proportionately reduced.

Oatmeal flour used sparingly has now and again served the purpose of a toilet powder. In any case, after the puff has been applied, the face should be dusted with a clean handkerchief.

One thing to beware of is the "general" puff kept in the toilet-rooms at ladies' clubs and elsewhere.

Those who prefer to buy their toilet-powders rather than make them, should remember to choose only powders bearing the name of a maker whose reputation is a sufficient guarantee that his preparations are harmless.

Wrinkles.—Wrinkles have been described as "furrows caused by the skin having become too loose and large for the organs it has to cover". Melancholy and lymphatic constitutions are those which wrinkle soonest. Over certain lines of the face we have no control, but there are others which we can influence—those which are concerned in the expression of the countenance. If the lines are produced by frowning, the remedy is in our own hands.

Hot water tends to wrinkle the skin, and bad cosmetics have a similar effect. Sometimes astringents, sometimes fatty substances, should be used as a cure. American ladies use arnica and glycerine; Frenchwomen prefer equal portions of alcohol and white of egg. A little vinegar and water may be used on occasions when astringents are preferred; an almond paste or spermaceti ointment when a fatty substance seems advisable.

Wrinkles and "crows' feet", if taken in an early stage, may undoubtedly receive a check, but after a certain point all efforts are useless. The most effectual cure—for the time—is the electric pad. But this can only be applied by an electrician, and is expensive. Honey and white wax, mixed into a pomatum and used at night, will help to obliterate wrinkles.

Freckles.—When the skin is stimulated to vigorous action by the heat of the summer sun, the result often appears in the form of "freckles", "liver-spots", or "sulphur patches", which fade away as the autumn advances. The disappearance of freckles may, however, be hastened by frequently applying to the face butter-milk, or a mixture of equal parts of lime-water and elder-flower water. Lemon embrocation is also useful for the purpose.

The recipe for it is: Borax, 15 grs.; lemon juice, 1 oz.; sugar candy, $\frac{1}{2}$ dr. Mix the powders with the juice, put the mixture in a bottle, and shake occasionally till the powders are dissolved. The embrocation is equally suitable as a remedy for sunburn. For this and for freckles the old-time cure of washing with milk is not to be despised.

Acne.—One of the most common skin troubles is acne, which generally makes its appearance between the ages of fifteen and thirty. On children or elderly folk it is rarely seen. It is usually due to an inactive condition of the sebaceous glands, which refuse to empty their secretions, and consequently become distended. These oil cells may be relieved of their contents by squeezing the surrounding skin with the finger nails, when the "black-heads" as they are called (from the fact that the top of the secretion through coming in contact with the dust of the atmosphere is naturally discoloured) will be discharged. The only drawback to this process is that it tends to enlarge the pores; the face should, therefore, be sponged immediately afterwards with cold water and one of the tonic lotions already suggested. The use of carbolic soap and a mild carbolic lotion will sometimes check an inclination to this complexional defect.

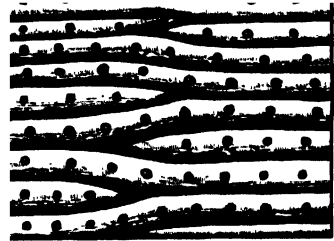


Fig. 368. — Surface of the Skin magnified, showing pores.

It is a German theory that excess of dandruff will bring acne, the scurf from the head falling in minute particles upon the face, where it enters the pores.

In some cases acne is aggravated by a too rich diet.

The Arms and Neck.—Rough red arms may be improved if they are washed in hot water and rubbed with a flesh-brush or a loofah, well lathered. Afterwards the following mixture should be applied: Powdered borax, 3 drms.; glycerine, $\frac{3}{4}$ oz.; elder-flower water, 12 ozs.

In cases of excessive perspiration Dr. Anna Kingsford recommends the use of tannin powder. Ablutions of boracic acid—1 part boracic to 20 parts of warm water—are also useful and purifying. In pulverized form boracic acid forms a good powder both for the arms and for the soles of the feet.

A mixture of lemon juice and borax will do all that is possible to whiten the arms and neck by simple, harmless means. If the colour will not change, nevertheless, do not resort to bismuth and chloride of lime washes. There is beauty in a soft brown skin.

THE EARS.

The ears should be washed with soap and water every day, and as often as necessary the passage should be cleaned with a wet corner of a towel, rolled up. This will be sufficient as a rule to remove superfluous wax.

If, however, something firmer is required, wrap up the rounded end of a hair-pin in a soft piece of rag, and clean the ears very gently with this instrument. The mechanism of the interior of the ear is very delicate, and rough handling soon causes injury to the tympanum.

Emollient injections will usually remove hard substances from the ear; if, however, these substances do not dissolve, proper instruments must be resorted to.

THE HANDS.

Roughness and Stains.—The beauty of the hand, although depending to a great extent upon its form, is appreciably enhanced by a good, well-kept skin and trim nails.

Roughness of the skin is sometimes constitutional, but is more generally the result of carelessness in failing to dry the hands properly. If the hands are washed in soft, warm water with mild, emollient soap, thoroughly dried, and in winter time dabbed with a mixture of rose-water and glycerine, they should never be rough. An excellent plan is to scrub the hands with a lathered nail-brush, which makes the skin soft and delicate-looking.

A little sand or powdered pumice-stone used with soap is useful for rough hands, and lemon juice has the twofold quality of removing stains and softening the skin. Again, hands that are rough and high-coloured will be improved if they are bathed two or three times daily in equal parts of hot milk and plain water, and rubbed at night with cold cream, pomade, or palm oil. Oatmeal-water is also of immense assistance in toning down a red, coarse skin. Take some oatmeal and boil it in water for an hour; strain, and use the liquid as a wash. It should be made fresh daily. If the skin is still obstinate, add an equal quantity of powdered starch to the oatmeal.

The use of soft water is the great secret of a soft skin. Use rain-water if possible, and if necessary a water softener, such as a few drops of liquid ammonia, bags of bran or oatmeal, or the rind of lemons or cucumbers, which are all cheap and efficacious.

To produce soft white hands there is no necessity to sleep in gloves smeared with grease. The custom is an offensive one. But glove-wearing in the day-time, when one is engaged in any kind of work that is likely to soil the skin, is earnestly to be commended.

Swollen Hands.—If the hands are hot and swollen, their appearance may be improved by rubbing them with a little glycerine and rose-water lotion, wiping off superfluous moisture, and drying them with a powder-puff. Then rub the hands together and wipe them with a soft rag.

The following is a recipe for a paste known as honey paste, which, if well rubbed into the skin after washing, will greatly encourage whiteness, and cannot fail to produce softness: Myrrh, $\frac{1}{2}$ oz.; refined honey, 2 ozs.; refined white wax, 1 oz.; rose-water, $1\frac{1}{2}$ oz.; almond oil, $1\frac{1}{2}$ oz. Put the

wax, rose-water, oil and honey together in a jar, and melt *au bain-marie*. When melted, add the myrrh, mix and allow to cool.

Another excellent emollient paste, known as almond paste, is made thus: Blanch and beat up bitter almonds, 2 ozs., to a powder; mix them with almond oil, $1\frac{1}{2}$ oz., and then add lemon juice, $1\frac{1}{2}$ oz. and weak spirit of wine, 2 ozs.

Chapped Hands.—For chapped hands nothing better can be suggested than applications of either of the foregoing pastes, or of pure cold cream, purified lard, spermaceti, or an oil of almost any kind. Use after every ablution.

Moist Hands.—Many hands are rendered uncomfortable by excessive perspiration. In these cases relief will be obtained by rubbing them over with eau de Cologne and the powder puff. The following medicated powder is to be recommended: Salicylic acid, 3 parts; talc, 7 parts; starch, 9 parts; powder and mix all together.

Alum in small quantities is sometimes prescribed, and a slice of lemon may be used with advantage.

A lotion of elder-flower water, 1 pint, and simple tincture of benzoin, $\frac{1}{2}$ oz., will also, if rubbed over the hands, produce a more comfortable sensation.

The Nails.—The pink tinge beneath the nail is due to large vascular papillæ. Near the root of the nail these papillæ are smaller and less vascular, and consequently the transparent horn of the nail above appears here of paler hue.

Nails are often speckled with white opaque dots. These are ascribed to general debility. Another explanation is that they indicate momentary disturbances of the cell-formation, caused by slight knocks and blows.

It is the aim of most people to cut their nails filbert-shape, the form preferred by artists. But all fingers do not "taper", and the shape of the tips must regulate the shape of the nail.

The "lunar" or milk-white crescent is an ornament that should be kept

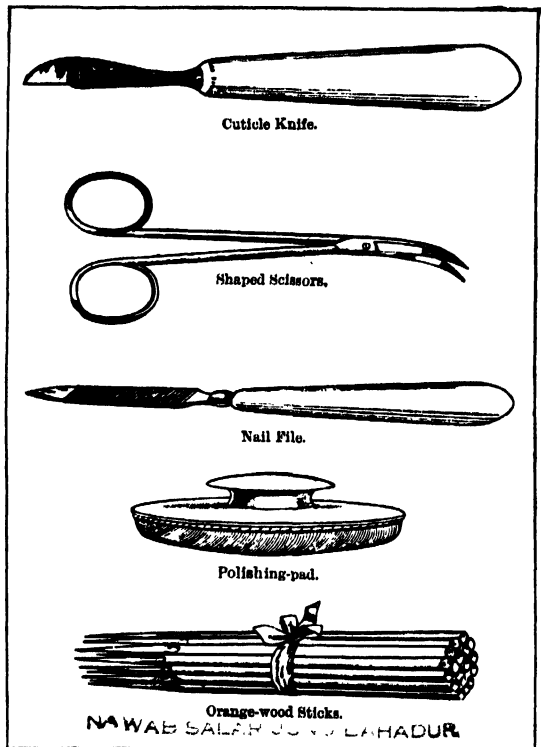


Fig. 369.—Manicure Requisites.

in view. The flesh at the root of the nail has a tendency to encroach, and must be pushed back with an ivory presser; also with the towel used when drying the hands. If this skin be allowed to grow forward, the edge becomes ragged and is often pulled and torn, causing pain and disfigurement.

Manicure.—A manicure-case should contain among other things (fig. 369) a pair of shaped scissors, a cuticle knife, ivory presser, chamois polishing-pad, some rose-pink cleansing fluid, orange-wood sticks, and one or two creams. The nails should be carefully trimmed every day, and as often as they need cutting the following simple treatment of manicure should be employed:—

Wash the hands and then steep the finger-tips in very hot water until the nails are quite soft and can be pared by one slice with the scissors. Stains should be removed by means of an orange-wood stick dipped in cleansing fluid. Push down the edge of the scarf-skin surrounding the nail, and, if necessary, cut it. Rub over the hands some cream, such as almond paste, using gentle friction, then wipe off any remaining grease with a soft towel; sponge the hands in warm soft water, and finally dab them with virginal milk or pure elder-flower water, and dust them with a swansdown puff. A little rose-pink should then be rubbed over the nails, after which they should be polished with the chamois pad to give them shell-like brilliancy and transparency.

Chilblains.—Chilblains on the hands should, if unbroken, be rubbed with turpentine. They are generally due to bad circulation, and therefore a general, as well as a local, treatment should be followed. Or they may be caused by poverty of blood, in which case three doses of codliver oil daily will work a speedy and effectual cure and also improve the health.

Anoint broken chilblains with honey paste, made according to the recipe already given (p. 52), except that no myrrh should be used. Cold cream is also recommended as an ointment.

Chilblains may sometimes be prevented by protecting the hands from sudden changes of temperature, and by rubbing them together frequently. Avoid holding the hands near the blaze of a fire.

Warts.—Warts, it is said, are due to clusters of papillæ of the sensitive skin (fig. 370) growing in length and bulk above the rest. A proportionate quantity of scarf-skin is formed, which gives a thick, rounded appearance to the surface.

In treating warts, pare off the hard outer skin, and touch the spot with the smallest drop of acetic acid (applied with a paint brush), protecting the neighbouring skin from contact with the acid. Pare the skin about once or twice a week, and use the acid daily.

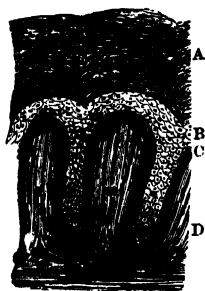


Fig. 370.—Vertical Section of upper part of Skin.

A, Epidermis or scarf-skin. B, Mucous layer, at the bottom of which is a layer of cells (C) containing colouring matter. D, Sensitive skin, surface of which is broken into minute projections or papillæ (a a).

THE FEET.

Care of the Feet.—When Sir Charles Bell remarked “There is nothing more beautiful than the human foot”, pointing out that there is an arch in whatever way it is regarded, he was probably right. But he was speaking of the true foot, not of the foot artificially deformed by the shoemaker’s art. Sir W. Flower, in his well-known work, *Fashion in Deformity*, says: “From personal observation of a large number of feet of persons of all ages and of all classes of society in our own country, I do not hesitate to say that there are very few, if any, to be met with that do not, in some degree,

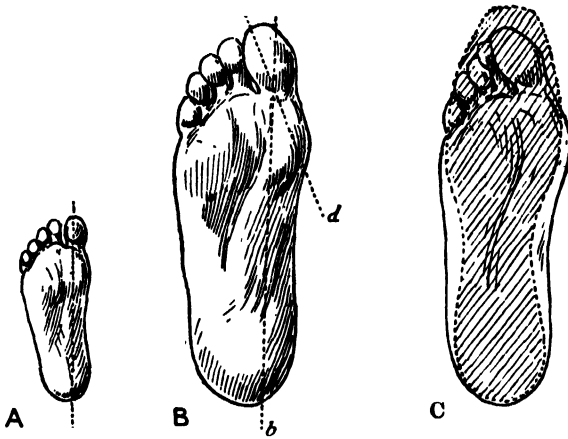


Fig. 371. A, Sole of Foot of Two-year-old Child, showing natural shape. A line corresponding to the axis of the great toe, if continued backward, would pass through the heel, as shown. B, Sole of Foot of Young Man—slight distortion. The axis of great toe *c d* does not correspond with line through heel *a b*. C, Sole of Foot, showing toes cramped and distorted by use of boots shaped as shown by shaded portion.

bear evidence of having been subjected to a compressing influence more or less injurious”. We rarely see the normal foot except in children. (Fig. 371.)

The feet should be bathed at least once a day, but more properly night and morning. At night sponge and soap them and attend to the nails; the water used should be warm. Let the morning foot-bath, however, be tepid, and use friction afterwards.

Feet that are habitually cold should be protected by woollen stockings; at night bed-socks can be worn. These as a supplement to a hot foot-bath are without the evil after-effects of the hot-water bottle.

Nothing refreshes tired feet so much as to bathe them in warm or luke-warm water containing a table-spoonful of toilet vinegar or carbolic lotion. In the case of tender feet it sometimes gives relief to smear the soles before exercise with tallow and powder with Fuller’s earth. In summer a frequent change of foot-gear is advised, especially in the case of feet that perspire

freely. A French doctor gives as a prescription for a dusting-powder which may be used in these cases, 4 parts of powder of lycopodium, 1 part of powdered alum, and 1 of tannin, mixed together.

Enlarged toe-joints are generally due to the wearing of boots or shoes that are too short, and so by pressing upon the big toe force it into a wrong position. There is no real cure for them.

Corns.—Of corns there are two common kinds, known as hard and soft, both painful if neglected. According to an eminent chiropodist "pressure and friction are unquestionably the predisposing causes of corns, although in some instances they are erroneously supposed to be hereditary". Some persons, however, are by constitution more liable than others to corns, the slightest friction causing them.

Another authority, Mr. Sparkes Hall, in his *Book of the Feet*, remarks:—"The feet, with proper treatment, might be as free from disease as the hands. I have arrived at the conclusion that corns are in all cases the result of pressure". He continues, further on:—"When corns are produced by friction and slight pressure, they are the result of the shoes being too large and the leather hard, so that by the extension of the foot the little toe, or any prominent part, is constantly being rubbed and compressed by its own action". From this it will be recognized that boots which are too large for the foot have also their disadvantages.

The advent of a corn is easily detected by a slight redness and a smarting sensation, which develops into "burning" and throbbing, and ultimately great pain, while a hard, horny surface is formed.

The best and most obvious treatment is to remove the cause of the corn, *i.e.* the pressure. If it is not convenient to discard the boot which is doing the mischief a simple plan of relief is to cover the corn with a piece of buckskin leather smeared with spermaceti ointment, a circle having first been cut out to correspond with the site and position of the corn. If the trouble occurs on the sole of the foot, use a felt sole and make a small cavity in it at the spot where the corn would otherwise press.

Sometimes the corn cure will be assisted by the application of the time-honoured ivy-leaf, or by the use of a caustic pencil, which must be carefully handled and applied. The late Dr. John Mason Good suggests the following treatment: Bathe the feet frequently in lukewarm water, in which a little sal ammoniac and potass have been dissolved, and afterwards apply a plaster made by mixing together gum galbanum, saffron, and gum camphor in equal quantities and spread on soft leather. The common house-leek is also said to have some effect on corns.

When cutting and scraping are resorted to, great care must be taken that the horny substance only is removed.

The soft corn also owes its origin to pressure. It usually appears between the toes, its softness being due to the constant moisture it obtains from being in this position. The scarf-skin becomes saturated and remains soft.

A treatment that has proved useful is to cut away the thick skin, being careful not to wound the flesh, and touch the corn with a drop of friar's

balsam. A piece of cotton wool (to be changed every day) should be worn habitually between the toes.

Prolonged rest is an effective cure for corns.

Bunions.—Bunions are nearly related to corns, and their first appearance is also indicated by pain and redness. A bunion often occurs on the ball of the great toe, and, if aggravated, occasionally develops into an abscess.

Relief is sometimes afforded by the application of a piece of lint spread with diachylon plaster; over this should be put a piece of thin buckskin leather, spread with adhesive plaster, and having a hole in it corresponding in size and shape to the bunion. This is Sir Benjamin Brodie's plan.

If the bunion becomes inflamed and painful, it should be bathed in warm water, and in extreme cases poulticed at night.

Toe-nails.—To the wearing of narrow boots again must be attributed ingrowing toe-nails. These, if permitted to become imbedded in the flesh, are apt to cause a good deal of pain, and sometimes a slight operation is necessary. In ordinary cases, however, it will be sufficient to snip a V-shaped piece out of the centre of the edge of the toe-nail, thus encouraging it to grow towards the centre and away from the "proud" flesh. Assist by forcing little pieces of lint under the corners of the nail.

THE TEETH.

Care of the Teeth.—Good health is to a great extent dependent upon the teeth, since their state has a powerful influence on the digestion.

The teeth are supplied with arteries, veins, and nerves, and are provided with a "crown" of ivory-like substance called enamel, which keeps the softer part of the tooth from being worn down by mastication (fig. 372).

One of the defects to which the teeth are most susceptible is the formation of tartar, which arises from the deposit of the natural moisture of the mouth upon the enamel. How necessary it is to keep the mouth healthy and the saliva free from acidity will appear from the fact that the teeth being composed of matter such as phosphate and carbonate of lime, the contact of strong acids decomposes their substance. Acid mixtures should be taken through a tube. Food affects the teeth by altering the character of the saliva.

All have it in their power to prevent the formation of tartar to an injurious extent by brushing the teeth night and morning in soft, lukewarm water, adding in the morning a polish of some simple powder, such as prepared chalk (plain, or scented with orris-root), or any of the subjoined recipes. If the incrustation has become very thick, the only remedy is to

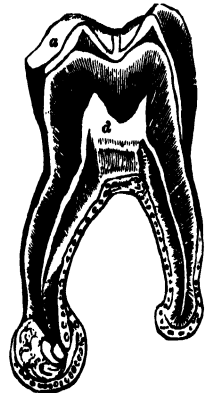


Fig. 372.—Section of a Tooth.

a, Enamel; b, dentine; c, cementum; d, pulp-cavity.

scale the teeth, which operation should be performed by a dentist. For ordinary purposes, however, a match-stick, sharpened to a point and rubbed in chalk and then round the discoloured teeth may be recommended.

The selection of a brush for cleansing the teeth should receive careful consideration. The bristles must be neither too hard nor too soft. In addition to the ordinary tooth-brush a palate-brush is useful for the inner surface of the teeth.

The mouth should be rinsed out after every meal, and all particles of food removed from crevices. For the mouth-wash use either fresh water or water into which a few drops of eau de Cologne or permanganate of potash have been poured, and gargle well.

It is very important that visits should be paid to a dentist about every six or twelve months, since he will be able to detect decay in its earliest stage, when it is imperceptible to others and to the patient. A tooth should be stopped at the first symptom of decay. To stop it oneself is, however, a mistake. But as a little delay must sometimes occur between the giving way of the tooth and a visit to the dentist, and as it is important that the cavity should not be exposed, the following treatment suggested by Sir Edwin Saunders, and also applicable to a case of displaced stopping, may be found useful. Remove all particles of food and broken enamel that may be fixed in the cavity, gargle with carbonate of soda or magnesia in water, and fill lightly with cotton wool dipped in eau de Cologne.

The teeth are very sensitive to heat and cold, and should not be exposed to sudden changes of temperature. The observance of such little points as closing the mouth when going into frosty air and breathing through the nostrils, placing an ice-cream immediately in the centre of the mouth without allowing it to meet the teeth, using lukewarm water for cleaning purposes, will all help to preserve the teeth. Hot water is not only bad for the enamel, but is relaxing for the gums.

It is from the nerve that the tooth derives its sensibility, and the exposure of the nerve gives rise to the racking torment of toothache—generally due directly to the condition of the tooth itself, but often aggravated by a bad or indifferent state of the general health. A draught of magnesia or some cooling saline mixture will often bring alleviation. Local measures are also useful, such as oil of cloves rubbed on the gum, or warm salt and water held in the mouth around the tooth, and afterwards ejected. Creosote is a well-known remedy; if one drop is placed on cotton wool and deposited in the cavity of the tooth, it will generally bring relief.

Tooth-Powders.—Many of the tooth-powders sold, though giving a dazzling whiteness to the teeth, contain acids which ultimately ruin the enamel, in the same way as the strong acids used in laundries for rendering linen snow-white eventually destroy it. Beware, therefore, of a dentrifice which is made up in a great measure of acids. Both ordinary powdered charcoal and cuttle-fish will free the teeth from stain and keep the mouth fresh. One of the most valuable dentifrices, however, is the charcoal

of the areca nut (also called betel nut), which removes tartar more readily than most tooth-powders.

Sir Edwin Saunders in his *Advice on the Care of the Teeth* gives the following recipe for a tooth-powder, which is excellent when the teeth show signs of becoming loose in their sockets:—Prepared chalk, 2 ozs.; cuttle-fish, 1 oz.; orris-root, 1 oz.; powdered myrrh, $\frac{1}{2}$ oz.; quinine, 10 grns.; tint with drop-lake and perfume with essential oil.

The following astringent powder is useful when the gums are relaxed: Fine powder of Peruvian bark, 1 oz.; powdered cream of tartar, 2 drms.; powdered gum myrrh, 1 drm.; powdered cuttle-fish, 4 drms.; oil of cloves, 8 drops. A tincture composed of equal parts of rhatany root and rose-water is also good when the gums need bracing. There are other tonics for the same purpose, namely, camphorated spirits, and also tincture of myrrh and bark. Either gum myrrh or Peruvian bark should enter into the composition of any astringent for the gums.

THE EYES.

Care of the Eyes.—The toilet of the eye should be of the simplest kind, and, so long as no actual disease exists, should consist only of cold spring water. Regular ablutions of this incomparable tonic will strengthen weak eyes and keep the strong in a healthy condition.

Rose-water is useful as a mild wash, and poppy-water is excellent as a bath for inflamed eyes. Any attempt to brighten the eye artificially by the pernicious use of belladonna is to be most strongly condemned. Trust to cold water and good spirits.

A fruitful source of evil to the eyes is the perusal of small type. Reading on journeys—especially through spotted veils—and writing and working with dark materials by an indifferent light are also to be rigorously avoided. In fact, never strain the eyes. At the first sign of fatigue, rest them for a few moments. Further, they should not be permitted to gaze too intently for any length of time upon any one object, but should be relieved by a change of vision.

It is unwise to rub the eyes violently when any hard substance has blown into them. The mere lifting of the upper lid is often sufficient to expel the particle, which is carried away by the tears. If necessary, however, touch the eyelid gently with the finger, passing the latter several times slowly across the tender spot towards the nose. If this is without effect, and the pain great, a camel-hair brush dipped in cream and passed gently between the ball of the eye and the lid may prove more successful.

Always avoid a glare, which, whether of sun or lamp, is most injurious to the sight, and use an oil reading-lamp in preference to a flickering candle. The shade should be green, a colour that is cool to the eye.

Give the eyes their necessary portion of sleep, use them carefully, and keep them thoroughly clean. After a dusty walk or ride it will refresh them very much to bathe them with rose-water. When the eyelids are at all inclined to adhere to one another, use either warm milk or a weak solution of boracic acid and water, a remedy that is frequently adopted for the eyes of infants, which it is important to remember should be gradually accustomed to light, and should never be suffered to remain before the dazzling glare of the gas-jet.

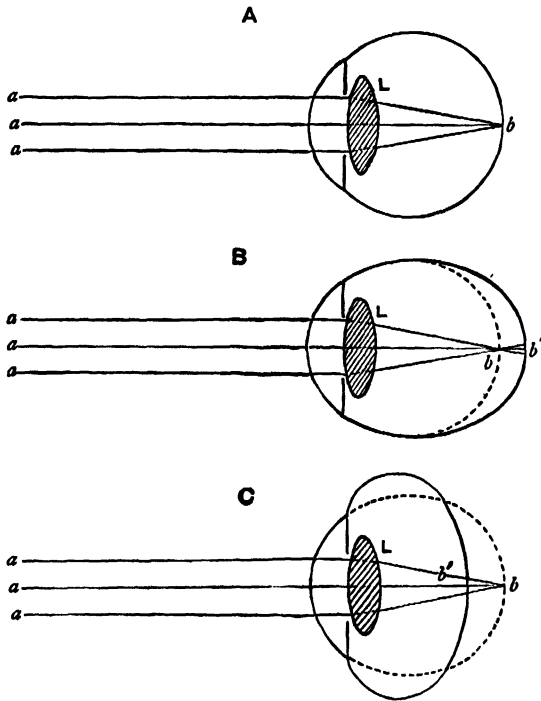


Fig. 373.—A, Normal Eye, rays of light *aa* from a distance coming through the lens *L* to a point *b* on the retina. B, Short-sighted Eye, rays from a distance coming to a point *b* in front of retina *b'*. C, Long-sighted Eye, rays from a distance coming to a point *b* behind the retina *b'*. *L* is the lens in each case.

to see distinctly objects at the same distance at which they could see them before they became short-sighted. (Fig. 373.)

“By aid of convex glasses”, says Mr. J. Harrison Curtis in his *Observations on the Preservation of Sight*, “of 36 or 30 inches’ focus, persons whose sight is beginning to be unequal to reading small print, or to working without fatiguing and paining their eyes, will be enabled to do either; and, if properly chosen, by the ease and comfort they afford, will tend materially to preserve the sight.”

Further on he adds: “As soon as the eye begins to do little better with the glasses used than without them, it is time to change them for more powerful magnifiers, and the second sight, or 30 inches’ focus, is necessary;

Styes, to which children are often subject, should be bathed with warm poppy-water and then touched with spermaceti ointment.

Tight clothing has a very injurious influence on the eyesight. A valuable hint, given by an oculist, is to avoid the use of hired opera-glasses, since disease may be communicated in this way, just as it may by the use of other people’s brushes and combs.

Glasses.—Glasses are of two kinds, convex and concave. Convex glasses are for those with long sight, who are unable to read or see small objects near them. Concave glasses are for the short-sighted, to enable them

though these should not be too hastily adopted by those who wish to preserve the sight into old age. Use them only when unavoidable."

"The proper selection of glasses is", says Sir David Brewster, "a point of deep importance." Many have worn out their sight prematurely by using spectacles of too great magnifying power; faulty spectacles are not less injurious. Mr. Curtis advises those whose occupation renders the use of glasses necessary to remember that the lower the degree of magnifying power possessed by glasses the less the eye will be fatigued by them. And he also recommends short-sighted people to employ glasses of no higher power than is necessary to enable them to see distinctly objects at from 40 to 50 feet distant. The Brazilian pebbles are expensive, but they make the best glasses that can be used, being very cool to the eyes.

Very little advice can be given in writing on the choice of spectacles for short-sighted people, inasmuch as the focus must, of course, depend upon the degree of strength or weakness of the sight. It may be taken as a general rule, however, that choice should be made of those glasses which most nearly represent the objects at their natural size, and do not strain the eyes, for obviously the chief object of spectacles is to give ease. Those that fail to do so are thereby proved unsuitable.

Eyelashes and Eyebrows.—It is generally supposed that if the eyelashes are regularly clipped during childhood, they will ultimately grow to a greater length than would otherwise be the case. If the cutting is, however, begun only in later years, it cannot be relied upon for producing the desired effect. On the whole, long lashes are a natural rather than a cultivated feature.

Eyebrows give character to the face; they may, if pale, be darkened with cocoa, butter, or olive oil.

THE FIGURE.

Obesity.—Obesity is due to various causes. Sometimes it is constitutional, and neither exercise nor rigid diet will reduce it to any great extent. But very often it is due to inactivity, rich living, or an over-abundance of food, even though plain. In the latter cases the remedy is obviously sufficient exercise and simple diet in small quantities. Violent measures suddenly resorted to with a view to reducing flesh will injure the health. One should rather accustom oneself gradually to an altered diet and increased exercise.

As regards food, abstain from anything of a fatty nature, and strike out from the menu potatoes, sugar, milk, and butter (except in small quantities), new bread, stout, rice, cocoa, suet, and what are known as farinaceous foods. Take such things as lean meat, toast, or thin slices of bread sparsely spread with butter, dry biscuits, lemon juice and water, weak tea, stewed fruit, vegetables in small quantities, and light wine, if fancied, for

dinner or luncheon. A wine-glassful of weak salts and water may be taken every other day or twice a week for a time.

Leanness.—If it is sought to increase the flesh, massage the arms and neck with warm linseed-oil added to an equal quantity of virginal milk. Take cod-liver oil in small regular doses and plenty of nourishing food.

Many slim women are distressed by over-prominent bones in the neck and the hollowing of the neighbouring skin, causing what are known as "salt-cellars". The only remedy is to try and encourage general plumpness in the ways suggested, paying special attention to massage at this portion of the body, and supplementing it as before with linseed-oil, which will be found very beneficial, although friction is really the most important part of the "shampoo", giving firmness, elasticity, and contour.

Vocal exercises and bodily gymnastics are also useful. In the case of thin arms use dumb-bells regularly three times a day. It will be strange if in a very short while the muscles are not developed and the arms made far more shapely.

THE HAIR.

Care of the Hair.—The popular notion that each hair is a tube is erroneous. Human hairs are solid, their substance being made up of cells and fibre (fig. 374).

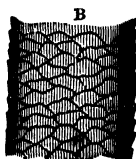


Fig. 374.

A, Section of a Hair. B, Surface of a Hair as seen under the microscope.

The hair acquires its characteristic colour from the presence of a greater or less quantity of pigment in its cells, this pigment being for the most part a compound of oil with sulphur and iron. The darker the hair, the greater the amount of iron and sulphur present. Fading of the hair is a sign that the colouring pigment is ceasing to be produced. The production in this climate of a dark pigment is a considerable tax upon the economy; hence grayness is most common with dark hair.

When we consider for a moment that the hair is nourished by the blood, it will be at once apparent how futile are all efforts to restore health to the hair by mere outward pomades if we neglect bodily hygiene. They are useful supplementary remedies, however, and in the case of dandruff will greatly help to clear away the trouble.

A healthy head needs little more than washing, brushing, and combing. If the hair is regularly brushed twice a day, it will be much less likely to require oils and tonics, its growth will be stimulated by the simplest and most desirable means, and an accumulation of dandruff will probably be prevented.

The condition of the hair must decide how often it should be washed. Generally speaking, the head should be shampooed once in three or four

weeks, in winter during fogs more frequently. The water should be soft and warm. Any soap used should contain the least possible quantity of alkali. Rinse the hair in fresh water until all soapy mixture has been cleared away, and then dry the head in warm towels, and rub the scalp until it glows.

One of the finest treatments for the hair is to let it flow loosely, allowing the air to penetrate, and rub the scalp gently but firmly with the tips of the fingers. This simple but healthy plan will, if followed, greatly improve the hair and stimulate the young growth.

In combing, begin from the tips of the hair and work upwards. Have patience with matted hair, and cut away knots in preference to wrenching them out by violent means.

It is generally advisable to cut the tips of the hair about once in four or six weeks. The plan of keeping the hair closely cropped for a few years rarely fails to produce luxuriant growth. Young children's hair especially should be kept short. An over-abundant supply taxes the scalp unfairly.

Near the mouth of each hair-tube or follicle there open two little oil glands (fig. 375) which serve to keep the scalp healthily moist. When there is a deficiency of natural oil the scalp and hair become dry and brittle, and a little nourishment in the form of pomatum may be rubbed in. When there is a superabundance of natural oil, and the head is hot and greasy, a tonic will be of use.

Philscome pomade (recommended by Dr. Piesse) is made as follows:—White wax, 5 ozs.; almond oil, 2 lbs.; otto of bergamot, 1 oz.; otto of lemon, $\frac{1}{2}$ oz.; otto of lavender, 2 drms.; otto of cloves, 1 dr. Mix the wax with the oils, applying just sufficient heat to keep the whole liquid. Stir the mixture as it cools, and, when cool enough to set, pour it out in pots, which should be slightly warmed previously. Eight drops of oil of sweet almonds and eight drops of attar of roses also form a useful mixture. The following tonics suggested by Sir Erasmus Wilson as a stay for falling hair are also useful for moist greasy scalps:—(1) Vinegar of cantharides, $\frac{1}{2}$ oz.; eau de Cologne, 1 oz.; rose-water, 1 oz. Or, (2) Eau de Cologne, 2 ozs.; tincture of cantharides, $\frac{1}{2}$ oz.; oil of nutmegs, $\frac{1}{2}$ dr.; oil of lavender, 10 drops.

The use of curling-irons has a deleterious effect upon the hair, making it unnaturally dry and hot, and often injuring the colouring pigment. Simple waving-pins are therefore to be preferred.

There is a theory that naturally curling hair can be encouraged by brushing the hair upwards or backwards when it first appears at any length on a child's head.

Falling Hair.—A little weak ammonia-water rubbed into the scalp will stay falling hair, but it must be used charily. The drying properties



Fig. 375.—Hair, Hair Follicles, and Glands.

a, Epidermis; b, true skin; c, hair bulb; d, sebaceous glands; e, muscle attached to hair sac.

of ammonia render it fit only for naturally oily hair. Again, it is credited with a tendency to encourage "blanching" or loss of colour, and is, therefore, scarcely to be recommended for dark hair.

In cases of partial baldness, stimulate the scalp frequently by friction with the finger tips until a warm glow and slight redness are produced, then dab among the roots of the hair one or other of the tonic lotions already suggested.

The brush, when in use, should be dipped in vinegar or sprinkled with lavender-water or eau de Cologne; this will have a tonic effect.

Hair Washes.—An excellent wash for fair hair can be made of one pennyworth of spirits of ammonia, the same quantity of spirits of rosemary, and the same of spirits of lavender, and two pennyworth of salts of tartar. Pour the mixture into an eight-ounce bottle and fill up with distilled water. When it is required for use pour about a table-spoonful into every two tumblerfuls of warm water, put it into a basin, and wash the hair until clean, gradually immersing the whole head. Rinse in fresh water into which a few drops of prepared carbolic lotion have been poured.

To obtain a shampoo-mixture suitable for dark hair, melt half an ounce of white curd or castille soap in a quart of hot water in which an ounce of carbonate of soda has been dissolved, add one ounce of spirit of wine, and perfume with a few drops of violet, jasmine, or other essence.

Yolk or white of egg whipped to a froth suits dark and fair hair alike.

Brush and Comb.—In selecting a brush preference should be given to one with moderately stiff, graduated bristles. The comb should be supple, with teeth of two sizes.

To wash the brush (which should be done twice a week), dip the bristles in cold water in which ammonia has been dissolved, and move them about in the solution, taking care that the handle and back of the brush escape contact with the water, otherwise, if they are of wood, the polish will be damaged. When the brush is clean, remove it from the ammonia, dip it in cold water, and hold it under the tap. Shake it, and stand it in a sunny corner to dry.

Combs should be washed by using a small brush (sold specially for the purpose) and strong ammonia. As the composition of the comb is often unsuited to very hot water, add cold water after the ammonia has melted and before commencing to wash the comb.

Dandruff.—Dandruff is due to various causes; sometimes to an excess of natural oil or the reverse, sometimes to a too liberal application of pomade, sometimes again to perspiration of the head. If permitted to remain, it destroys the hair and forms a crust over the scalp, choking up the pores and preventing the young hairs from sprouting.

Should the dandruff appear flaky and dry, use a little olive oil or pomatum. If it is greasy, rake it gently with a tooth-comb, wash the head in a mild carbolic lotion, and rub an astringent into the roots of the hair. A rosemary wash, made by mixing a 2d. packet of rosemary powder with a pint of soft water, will answer the purpose. The wash should be put up

in a stoppered bottle for use when necessary. A borax and camphor wash is also useful as a cure for dandruff.

Gray Hair.—The usual cause of premature grayness has already been explained; but sometimes it is hereditary. In its early stages premature “blanching” of the hair may be arrested by means of violet oil put on at night with a small brush. Some people object to the greasiness thus produced, but this effect may be counteracted by rubbing the scalp the following morning with a rosemary wash, using a bone-handled sponge and toilet saucer for the purpose. These simple measures are often sufficient to enrich the colour of dark hair that is “turning”, and, at any rate, are perfectly harmless. Insufficiently drying the hair encourages loss of colour.

Oils and pomatums of any sort have a tendency to darken the hair, and therefore should be but sparingly used on fair hair. Oil of walnut is a good darkener, and a sulphur lotion will also help to preserve the natural tints of the hair.

Superfluous Hair.—Abroad superfluous hair is admired rather than otherwise, but Englishwomen at any rate look upon it as a disfigurement, and any effectual recipe for its destruction would be considered a blessing.

The three means employed to remove it are tweezers, depilatories, and electrolysis. Unfortunately in the case of the first two the removal is but temporary. Tweezers are useful, but once brought into use they will be needed again and again. They are, however, comparatively harmless, and will be found serviceable by those who have patience enough to use them.

Depilatories, it is true, will remove the growth cleanly for the time, just as a razor will shave a moustache; but they do so by burning, and as they are applied in the form of a paste which lies on the skin for a few seconds, there is a risk that the epidermis may be burned away or highly inflamed. They are not, therefore, under any consideration to be recommended. The use of them is fraught with danger to the skin, their composition being often a mixture of quicklime, soda, and sulphide of arsenic.

A permanent cure is only to be effected by using the electric needle, which penetrates below the surface of the skin, and not only touches the hair-sheath, but attacks the little pouch in which it is nourished, and by shrivelling it up prevents a return of the growth. Only the most skilled hand should undertake the operation, which, unless carefully performed, will leave unsightly and permanent marks upon the face.

Superfluous hair often appears above the lip and between the eyebrows. It may be lightened and rendered less conspicuous by painting with peroxide of hydrogen, applied with a camel-hair brush. If this causes the skin to smart, weaken the solution.

BATHS.

Unsuitable Times for Bathing.—A golden rule to be observed with regard to baths of any description is never to bathe immediately after a solid meal, nor when the body is in a highly heated condition. To do so is to incur the most serious risks. Moreover, the bath-room door should never be locked.

Morning Baths.—The morning sponge-bath, which, as a rule, should be

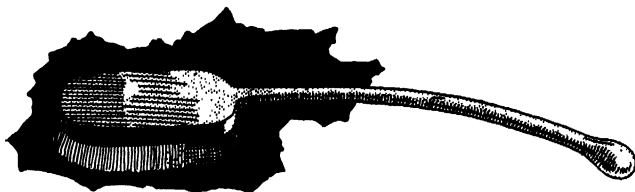


Fig. 376.—Flesh-brush.

taken tepid, is a great aid to health and beauty. Some persons prefer the shock of the cold bath, and when this agrees with one there is no finer tonic. Use the sponge freely while in the water, and on emerging wrap the body in a bath-sheet and rub briskly until a warm glow is produced. Or, use a flesh-brush similar to the Indian rheesah (fig. 376), and complete the toilet as quickly as possible. Should the body feel chilled before entering the bath, rub it with a rough towel. A little liquid ammonia added to the cold or tepid water will usually prevent chill; it is also very refreshing, as likewise are a few drops of eau de Cologne or virginal milk.

The Shower and Douche.—The shower-bath is invigorating, and the douche-bath useful for relieving sprains.

Warm Baths.—The warm bath is a great restorative in cases of over-fatigue. A medical member of a royal household in a little *Hand-book for Bathers* recommends that the temperature should be about 92° Fahr. It may, however, be increased to 96° or 97° as the body grows accustomed to the heat. For children the warm bath may safely range from 92° to 94°, according to the same authority, and a tepid bath varying from 92° to 85° should afterwards be substituted. Gradually diminish to a bath of 85° to 75°, and from this reduce to a cooler temperature of 75° to 60°. As the bath in most modern houses is arranged with hot and cold taps, the temperature of the water can be easily regulated.

Hot Baths.—The hot bath, which ranges from 97° to 120° Fahr., should be taken only under medical advice by those subject to faintness, heart affections, or apoplectic symptoms.

Gas-heated Baths.—Whether strong or delicate, never get into a gas-heated bath—Geyser or ordinary—until the jet is turned off, and while the water is being heated let the window and door be partially open for the free escape of the poisonous fumes. A vent-pipe should always be attached to a Geyser (fig. 377), and the bell-rope within easy reach of any hot bath of

whatever kind. The drawback urged against a hot bath, that it opens the pores and makes one liable to chill, may be counteracted by afterwards turning on the cold tap and letting the water run in until the temperature is reduced.

Medicated Baths.—The soda bath is one of the most common of medicated baths, and is a useful treatment where there is a rheumatic tendency.

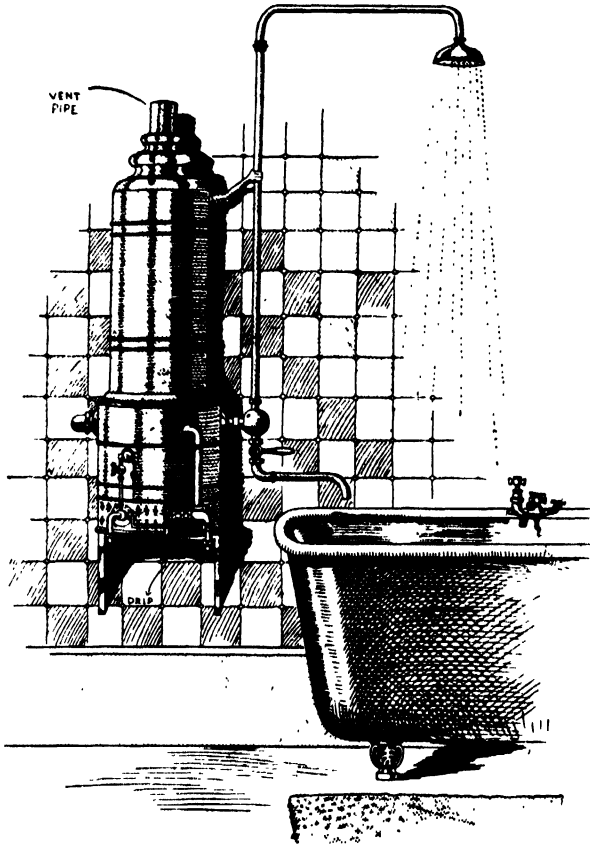


Fig 377.—Ewart's Geyser, with Shower Attachment.

or inclination to cold and sore throat. About half a pound of soda should go to a large bath of hot water.

The ammoniacal bath is prepared after the same fashion, carbonate of ammonia being used instead of soda. It has a purifying effect, and is beneficial in cases of sciatica and certain skin affections. For other eruptions the sulphur bath is better. This should be prepared from a doctor's prescription.

The bran bath, used a great deal by Frenchwomen, makes the skin soft and smooth. Boil four or five pounds of bran in four or five quarts of water for half an hour, and then add the whole to the bath.

Starch baths are prepared in the same way, and are softening and refreshing. The alkaline bath contains half a pound of sub-carbonate of potash. This has a somewhat similar effect to a bath of Vichy water.

Kitchen salt added to the ordinary bath renders it bracing and agreeable.

The vapour bath is not often used, but is serviceable for producing rapid perspiration.

Turkish Baths.—Although no form of ablution is so thoroughly cleansing as the Turkish bath, yet on account of its intense heat it should never be indulged in by the delicate, especially those whose hearts are weak, unless upon a doctor's recommendation. For others it is beneficial in various ways.

In writing of the temperature of the Turkish bath, Sir Erasmus Wilson says that it should range in medium limits between 120° and 140°.

Sea-bathing.—Much of the success of sea-bathing depends on the wisdom of leaving the water before a chill is produced. Those who cannot swim should not remain in the sea longer than ten minutes. In any case the head should be immersed at once.

If there is any shivering, chattering of the teeth, and blueness of the skin, it is evident that cold sea-bathing should not be persisted in. In that case it would be better to take a warm sea-bath at home, or add ordinary marine salts to common spring water.

It has already been stated that no one should bathe immediately after a solid meal, but the importance of the advice will justify repetition. Two or three hours should elapse between the meal and the bath. In the case, however, of a morning swim before breakfast, it is as well to take some light refreshment, such as a biscuit and a cup of milk, beforehand.

Never go into the water in an exhausted condition, and be careful if subject to cramp. On emerging from the sea follow the advice given regarding cold baths.

Doctors agree as to the disadvantages of plunging a young child into cold sea-water, but a warm salt-water bath will often strengthen wonderfully a youthful constitution. The water should be nearly the temperature of the child's body, that is, about 97° Fahr., and cooled until it reaches 75° or even 60°.

CHOICE AND CARE OF DRESS.

CHOICE OF MATERIALS.

The materials from which clothing is manufactured are found both in the vegetable and the animal kingdoms. The latter are the more hygienic, as they have already, with few exceptions, clothed the lower animals, and nature, which is not led away by custom or by fashion, makes no mistakes in this matter.

Different Classes of Materials.—**WOOL**, the safest clothing for this climate, on account of its being a good non-conductor of heat, is manufactured into numerous materials, both for underclothing, outdoor clothing, and dresses. The principal kinds in use are: Flannel, serge, cashmere, merino, cloth, nuns' veiling, tweed, alpaca, and viyella.

SILK, which is next in the power of preserving the heat of the body, is manufactured into: Sarcenet, grosgrain, glacé, velvet, plush, satin, and tussore.

COTTON, the third in its heat-preserving power, is manufactured into: Calico, flannelette, velveteen, muslin, gingham, zephyr, and prints.

LINEN, which is the lowest in the scale, is manufactured in various colours, but never loses its individuality as does cotton. Holland is brown linen.

INDIA-RUBBER, when used as a coating for silk or cotton, becomes mackintosh.

FUR and **HAIR** are used for trimmings, and for outdoor garments and for making felt.

And, lastly, **LEATHER** is used for many different purposes.

Due consideration should be given to the width of a material. At many of the inferior shops, cloths which are a few pence less in price are also a few inches less in width, and thus, while apparently cheaper, are not so in reality. Competition is so keen that, with few exceptions, a good thing costs nearly the same everywhere, and when offered a bargain it is well to enquire how it is that an article, worth a certain price, is sold for less. Of course, a material, with a distinctive pattern which marks the season of its manufacture, can often be bought below its value at the "end-of-season sales", for the shopkeeper is thereby relieved of the risk of keeping his stock for another year. But only those things that have a fashion are sold cheaply; thus it is at all times difficult to get plain black materials, which vary but little from year to year, for less than their ordinary price.

If the buyer will only buy what she really wants, and not what she thinks she may want because it seems cheap, a bargain would oftener be what it is supposed to be, a saving.

An all-wool material wears better than one with an admixture of cotton. If the wool shrinks with wet, it shrinks evenly; if it is mixed with cotton, it is liable to "cockle" (a much worse catastrophe), as the two materials shrink in different degrees. All the more delicate colours, as heliotrope, pink, and light blue, fade in the sun and sea air. This, too, should be considered by a careful woman.

Different Kinds of Materials.—Materials in general use are described below in alphabetical order.

ALPACA is a lustrous, silky-looking woollen material much used for summer wear. It has the advantage of being light and cool, and from its glossy surface is what is called "clean wear". Alpaca is manufactured from the hair of the llama goat. The cheaper qualities crush easily. Width, 44 to 46 inches. Price, from 1s. 6d. to 4s. 6d. A good wearing alpaca costs about 2s. 6d. per yard.

BATISTE is a cotton material much resembling gingham, but thinner. The threads are dyed before making up, and as the weft and warp threads are not of the same thickness, the squares form uneven check patterns. Width, 30 to 32 inches. Price, 1s. to 4s. 6d. per yard. Cotton voile is a beautiful material printed in designs or plain. Price, 10d. to 3s.

CALICO is made from the yarn manufactured from the downy covering of the seeds of the cotton plant, grown in the United States, India, &c. It is used for underclothing, and has been largely superseded by merino and viyella by the more advanced section of the community. It is much less expensive than wool, does not absorb odours so readily, and is a perfect washing material. A good calico has fine, even threads, little dressing, and feels soft to the touch. There are many well-known makers whose names are guarantees of quality. The amount of dressing may be ascertained by rubbing the material in the hand, as the dressing is easily removed; the quality of the calico can then be judged. A thin make is most suitable for summer underclothing, and a heavier one for winter wear; for night-shirts, a twill, which usually wears well, is appropriate. Width, 32 to 36 inches. Price, from 4d. to 9d. per yard. An average calico costs about 6d. per yard.

CAMBRIC is a thin semi-transparent linen, made in white and shades of pink and heliotrope, and is considered to be very dainty-looking for underclothing. Width, 36 inches. Cost, 1s. to 2s. 6d. per yard.

CASHMERE is a soft, light, woollen twill. It will not reverse, the under side being plain. It can be obtained in both dark and light shades. Cashmere makes durable dresses, as it can be renovated at home by sponging and ironing, and will clean and dye excellently. In dark colours it is more economical to buy the better qualities. Width from 44 to 46 inches. Price, from 1s. 6d. to 5s. per yard. A medium quality costs about 3s. 6d. per yard.

SOME FAMILIAR FURS

At top of plate

Sealskin, in three stages: Unplucked, Plucked, Plucked and dyed

On top of Sealskin (from left to right)

Ermine

Chinchilla

Mink

In centre of plate

Wolverine

On left hand of plate

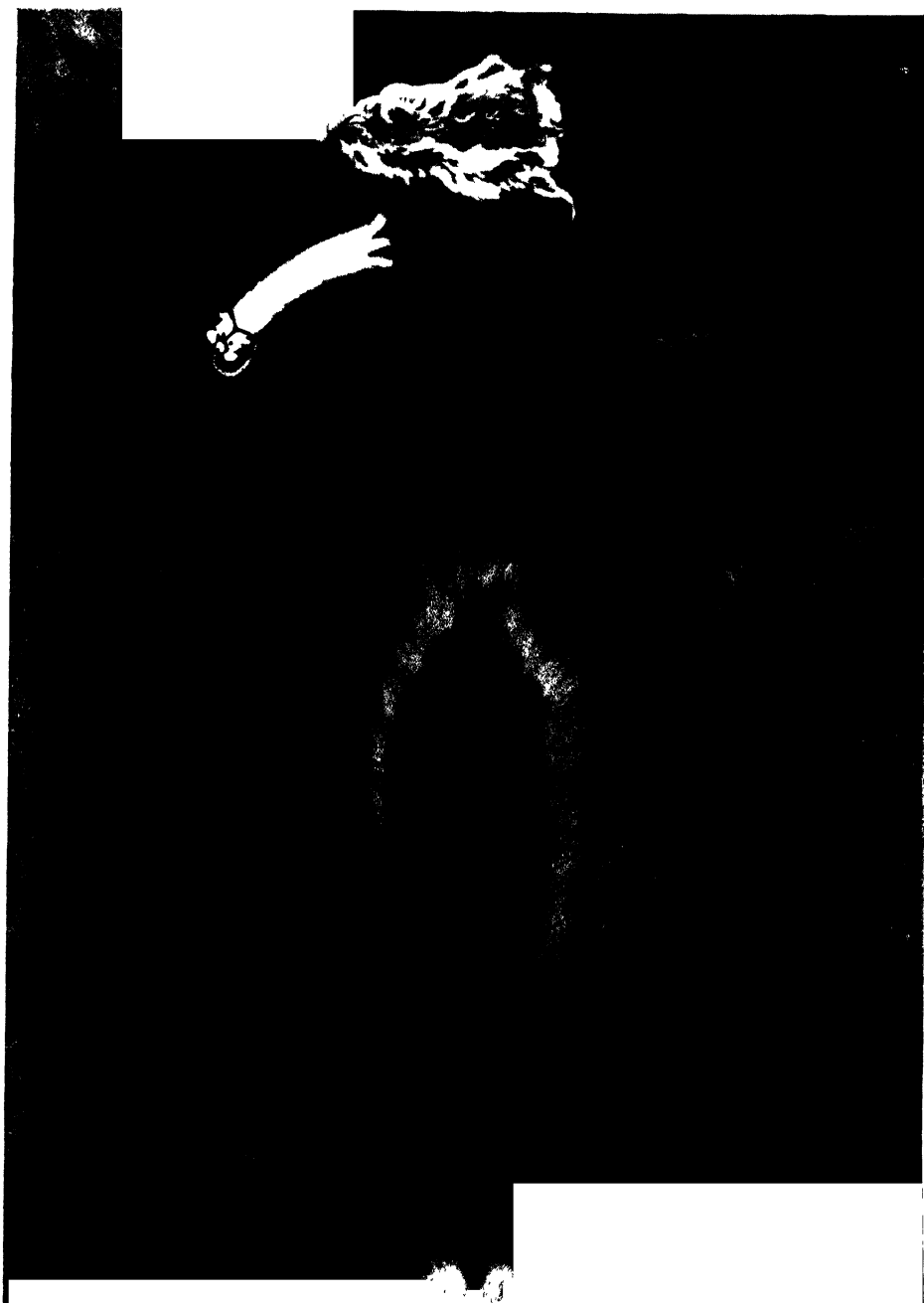
Astrakhan, or Persian Lamb

Marten

On right hand of plate

Silver Fox

Sable



CLOTH in its many varieties, such as amazon, habit, and vicuna, is largely used for dresses. It is distinguished from other dress materials by having no threads visible on the right side, and being finished with a gloss. All cloths are subjected to what is called "milling", so that they may become "felted", decreasing at the same time in length and width, and increasing in bulk. The finish, which is imparted by pressure, is not permanent, and almost all with a highly glossy surface spot with rain, so that they soon lose their freshness. The process known as "pirle finish" prevents this efficiently. Cheap cloths should be avoided; they are partly made from shoddy, that is, wool made from rags, which, being twice manufactured, loses its natural elasticity, and is not so durable. Width, 42 to 46 inches. Cost, from 2s. to 5s. per yard.

DELAINE is a light woollen material woven in colours, and is suitable for summer gowns. Price, from 1s. per yard.

FELT is a woollen material, manufactured by pressure and moisture without weaving. It is held together by the interlocking of the little hairy particles of wool. It is now little used for garments, though underskirts are sometimes made of it.

FLANNEL is the most healthy material for underwear. Many persons suppose that when dyed red it acquires additional warmth, but this is, of course, a mistake. "Natural" flannel, which is made from undyed wool, washes better than either white or coloured. A good flannel is light in weight and soft to the touch. *Viyella* is the best kind of flannel to buy, as it never shrinks with wetting. *Melton* is a loosely-woven material, almost resembling knitted goods, with a thick loose nap. This is the warmest material for dressing-gowns. Flannel is a single-width textile, 32 to 36 inches wide. Price, from 1s. 3d. to 2s. per yard.

FLANNELETTE is a cotton, dressed to imitate the appearance of flannel. Owing to the nap, it feels warmer than calico, as it prevents the rapid radiation of heat from the body. But it does not contain any wool, and therefore is not an efficient substitute for flannel. It is printed in flannel patterns for blouses, and in light and pretty colours for underwear. Its cheapness is its chief recommendation. Its disadvantage is that it very quickly soils and looks shabby. It is also very inflammable in the low-priced kinds. Width, 27 to 36 inches. Price, from 3d. to 7d. per yard. The cheaper qualities are narrower in width.

FURS are the skins of animals dressed with the close, soft hair on. The most important kinds used for complete garments in this country are seal-skin and sable, both very expensive. Other furs are used as trimmings or neck-ties. The price depends on the quality. Furs should be purchased at a reliable furrier's, as the uninitiated are unable to detect imitations, and are at the mercy of unscrupulous dealers.

GINGHAM is a coloured cotton material of thin texture. The threads are dyed before being woven. The pattern is usually a check of white and a colour. The two sides being alike, it is economical, as it can be cut to great advantage. Blue and pink gingham wash excellently. Black

washes well with care. (See "Laundry Work", vol. iii.) Width, 30 to 32 inches. Cost, 4*d.* to 7*d.* a yard.

GRENADINE is an open material not unlike muslin, but made of silk or wool, or a mixture of the two. It is either plain or else has a pattern worked into it. Black grenadine in the better qualities is very serviceable. It is also manufactured, but more rarely, in colours, and is used principally for evening dresses. Width, 42 to 44 inches. Price, from 1*s.* 6*d.* to 6*s.* 6*d.* per yard.

HOLLAND is a strong, brownish material made of flax, and of excellent wearing quality. Being undyed, it washes, and looks well as long as it is whole. It does not soil so quickly as cotton, and therefore is a favourite material for children's dresses and blouses. Width, 30 to 36 inches. Cost, 7*d.* to 2*s.* per yard.

LEATHER. See Boots and Shoes (p. 93).

MACKINTOSHES are made in a variety of weights and colours. A good one is light and thin in texture, and ventilated in parts with a number of small holes to facilitate the evaporation of perspiration. No waterproof material is healthy without this ventilation. The material can be bought by the yard, but is useless for home-made garments, as every hole made by the needle is an opening for the entrance of rain.

MERINO is a woollen material somewhat resembling cashmere. It differs in having a twill on both sides, and is therefore reversible. It is more economical than cashmere on this account. It is, as a rule, self-coloured, and being made of pure wool takes very delicate and beautiful dyes. Width, from 44 to 46 inches. Cost, 2*s.* 6*d.* to 5*s.* per yard.

MUSLIN is a very fine transparent cotton textile. It is either plain or printed in various designs, or with raised patterns. Owing to the changeableness of this climate it is not much used for outdoor wear, but makes extremely pretty-looking gowns for evening and indoor wear. White muslin is less expensive than coloured, and the more artistic the design and colouring, the higher the price. An inferior muslin soon loses its freshness, and becomes soft and twisted-looking after washing. Indian muslin is soft and silky, having no stiffening; and organdi muslin is soft and opaque, with a raised coloured spot. Chiffon is a very fine muslin of a silky appearance.

NUN'S VEILING is a thin woollen cloth, resembling, as its name indicates, that worn by nuns for their veils. It is made in black, white, and colours. It is frequently called voile. The white and coloured sorts make pretty summer clothing and charming and inexpensive children's party-frocks. A very good effect is obtained by having the lining in a different colour, as the dress will seem to be of different shades according to the tints of the lining. Width, 42 to 46 inches. Price, 1*s.* to 1*s.* 6*d.* per yard.

PIQUÉ is a strong, white, corded material of almost everlasting wearing properties. Its principal use is for children's coats and capes, but it is also used for summer dresses. Width, 30 to 32 inches. Price, 8*d.* to 1*s.* 2*d.* per yard.

PLUSH is a handsome and expensive pile fabric made of silk. It is used for mantles and jackets, and also for trimmings. Being silk, it takes exquisite dyes, but only the better qualities are satisfactory, the pile in the cheaper makes soon flattening and wearing off. Width, 18 to 22 inches in trimming-plush. Price, 2s. to 6s. 6d. per yard. Mantle-plush is made wider to obviate the need of frequent joinings.

PRINTS are cotton materials on which coloured patterns are printed, not penetrating to the under side. They differ from gingham and zephyrs in being coloured after, instead of before, they are woven. Print is largely employed for servants' dresses and blouses. A good one will stand constant washing, and some of the less bright lilacs and purples may even be boiled, which, for dresses likely to be much soiled, is a distinct advantage. Pinks are serviceable, but the brighter blues, heliotropes, and yellows fade quickly, and therefore are not economical. As in muslin, the more artistic the design and colouring the more expensive the print. Width, 30 to 32 inches. Price, from 3d. to 8d. per yard.

SATIN is a silk material with a bright glossy surface. The cheaper qualities, which have a cotton back, are used for trimmings. The better qualities, principally in black, white, gray, and pale colours, are used for dresses. Satin is an expensive material, but its durability renders it not so costly as it appears at first sight. Width, 18 to 22 inches. Price, 2s. with cotton back, to 15s.; more when made entirely of silk.

SERGE is a strong worsted material made in numberless varieties, but always twilled. The difference between a worsted and a woollen material lies solely in the method of manufacture. In the former the threads are straight, or as straight as possible; in the latter the interlocking of the fibres is allowed to take place, and this is further increased by the process of "milling" or "fulling", which causes shrinkage, with (as explained in the paragraph on cloth) a consequent increase in bulk. Twilled fabrics are more durable than plain ones, and serge is looked upon as the best wearing material that it is possible to obtain. It can be bought "shrunk" so as to be uninjured by rain, and dyed so as to remain the same colour when exposed to sea-water and sea air. Though the finer kinds wear well with good treatment, they are apt to lose the nap, which is the distinguishing mark of freshness. Cheviot is a strong loose make, with the two sides almost the same. India serge is the softest of all. Serge is most durable when it has a fine distinct twill or rib. It is reversible, but care has to be taken in the making-up to have the lines all running the same way—upwards, from left to right looking at the wearer. The width varies, some serges being single width. Price, from 1s. 6d. to 6s. 6d. per yard. A medium quality costs about 3s. 3d. per yard.

SILK was at one time very much adulterated, the reason being the immense demand for cheapness. Manufacturers responded to this demand by making silks which were greatly increased in weight during the dyeing process. These weighted silks, especially in black, were brittle, and cracked in the folds. Coloured silks are, as a rule, purer than black silks,

as there is more difficulty in adulterating them, but even these were heavily weighted. They re-dye very badly; indeed, if they are light-coloured, they are often rendered quite useless by being dyed black. It has been said that the chief advantage of being clothed in one of these silks is that the wearer could not take fire, the fabric being largely adulterated with minerals. As it is difficult for an inexperienced person to choose a reliable silk, the only safe way is to go to a trustworthy shop, and ask the seller's advice.

TUSSORE is a soft plain silk, and is sold in the natural tint, or dyed to any colour. It washes and wears well.

TWEED is a strong, serviceable, worsted material, like serge, suited for wearing in bad weather. It is usually made from self-coloured yarns in dull grays and browns, with a sprinkling of colour to give tone to the material. Tweed and homespun were formerly made by hand-weaving in cottages, and thus the latter obtained its name. The material is always rough and usually thick, though thin tweeds are now manufactured. Single width, 28 to 30 inches; double width, 46 to 52 inches. Price, from 2s. to 6s. per yard.

VELVET is a handsome pile fabric made from silk, though some trimming velvets have cotton backs. Being of silk, it has in its very lovely colouring a distinct advantage over velveteen; but if a good quality cannot be afforded, it is much better to buy the latter material. Width, 18 to 22 inches. Price, from 1s. 6d. to 10s.

VELVETEEN, a cotton imitation of velvet, is now brought to such perfection as regards finish and colour that it makes very handsome dresses. It does not spot with rain, and will wash well with care. (See "Laundry Work", vol. iii.) It is wider than velvet, and can never be mistaken for it, being heavier and softer.

VELVETEEN CORDUROY is a striped variety, similar to that used for the uniforms of railway porters. It wears well, as it shows marks less than the ordinary velveteen. Width, 24 to 27 inches. Price, from 2s. to 4s.

Tests for Different Materials.—There are various tests by which the adulteration of clothing materials may be detected. They are briefly these:—First, by the microscope; secondly, by burning; thirdly, by chemicals; and fourthly, by touch.

Usually the manufacturer applies one or other of these tests while the material is still in its raw state. The purchaser is, as a rule, unable to apply the chemical and microscopical tests, so the only tests within his or her reach are those by burning or by touch.

WOOL is a filament which has on its surface fine scales called "imbrications". These, seen under the microscope (fig. 378), all run in the same direction, and give to manufactured wool its peculiar power of "felting". There are from 1800 to 2800 imbrications to the inch. They cannot be detected by the naked eye, nor in a single fibre by touch, but may be felt by one accustomed to the work, by drawing a number of fibres through the forefinger and thumb from the points towards the thicker ends. Wool

fibre is solid, and in this particular differs from cotton, linen, or silk. When burned it does not flash, but curls up and blackens, emitting a disagreeable odour. In nitric acid it turns a bright-yellow colour, and in bleaching-

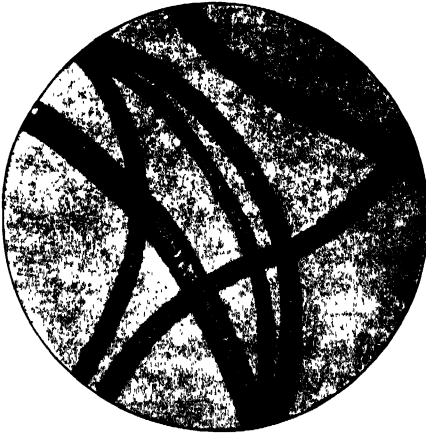


Fig. 378. —Fibres of Wool.



Fig. 379. —Fibres of Silk.

(Both magnified about 170 diameters.)

liquid it becomes a bright brown. To the touch wool feels light and soft in proportion to its bulk.

Silk, when examined under the microscope (fig. 379), is found to consist of two fibres laid side by side and firmly knit together. Like wool it does



Fig. 380. —Fibres of Cotton.



Fig. 381 —Fibres of Linen.

(Both magnified about 170 diameters.)

not flash, but curls and blackens when burned, though it gives off little smell. The smoothness and softness of silk differ from those of any other fabric.

Cotton (fig. 380) shows a twisted, ribbon-like figure, having distinct

corded edges. This flat ribbon in its earlier stages was a cylindrical tube, which collapsed as growth progressed. The twistings are only discernible under the microscope, and are the distinguishing feature of cotton fibre. There are from 100 to 300 of them to the inch. Cotton and linen flame when burned. They are not altered in colour by nitric acid, but are whitened by bleaching-fluid. They are smooth and heavy to the touch.

Linen (fig. 381) has a rounded fibre with a jointed structure something like the bamboo in miniature. It differs from wool and cotton in having no hairy growth.

When selecting manufactured goods at a shop the buyer has little opportunity of applying the foregoing tests. The simplest test available is to tear the material for an inch or so the weft way (the opposite way to the selvedge). When cotton is present it is often distinctly visible. If a thread or two can be ravelled and stretched the woollen thread gives and will break easily. Cotton (linen is too expensive to be thus employed) has no elasticity and offers much more resistance.

MENDING AND DARNING.

Mending Equipment.—The general rules to be followed in mending and darning are the same, whatever the articles to be repaired. As the work must be executed neatly and inconspicuously, the needles used should be as fine as is consistent with comfort, and the thread should match as nearly as possible that of which the fabric is composed. For woollen garments made in real knitting or in imitation of it, in stockingette or elastic weaving as it is called, and for flannel goods, soft wool must be procured. The rule, which it is not always possible to carry out, is that the strands used in mending should be as fine as, or finer than, those of the manufactured article. Pyrenean, Shetland, Angola, and Saxony yarn of the best quality are all suited for darning textiles resembling them in texture.

It was formerly the custom to cut the worsted into short lengths, and to double and fold them up in paper so that by means of the looped end they could be easily withdrawn as required. Now that mending-wool is prepared ready wound on cards this trouble is rarely taken except for unusual makes and for shades procurable only in skeins.

For hand-made hosiery some of the wools used in knitting them should be obtained for mending purposes. With this aid, where two or more colours occur in the work, as in shooting and cycling stockings, the pattern can be easily imitated in the darn.

For white thread or cotton goods there are various suitable makes of darning threads, and for fine elastic weaving white silk is preferable to cotton for mending purposes.

Moravian thread is especially valuable for white work. It is exceedingly soft, and as several thicknesses are woven together on the reel, one or more

of them can be passed through the needle according as a fine or coarse strand is required. Few threads are so well adapted for darning delicate lawn and linen, handkerchiefs for example.

Black mending-cotton turns brown in time, so silk should be used instead.

Filoselle silk is convenient for darning either cotton or silk articles. As in the case of Moravian thread, several strands of it can be threaded together. Some makes of knitting-silk can also be employed.

For straight-woven woollen articles no better mending material can be found than ravelled-out threads of the same fabric. If it is impossible to work wholly with them, the tear should be drawn together with a thread as nearly matching the stuff as can be obtained. This thread should then be crossed and so concealed by a few stitches run over it with the ravelings.

The many new threads and fibres, animal and vegetable, now woven into articles for personal and other uses, have resulted in the introduction of various novel working materials. But for general purposes, silk, wool, linen, and cotton threads are a sufficient equipment; the more modern textiles resemble one or other of the older ones so closely that they are not really essential for mending purposes.

In addition to needle and thread, a few accessories are necessary to ensure success in darning.

Inexperienced workers find that tacking the worn place round, beyond its limits, to a card or piece of oiled cloth (*toile cirée*) renders work easier, as it extends the material at the right tension and prevents puckering.

Balls of bone or wood are still used by some darners to fill up and stretch the feet of hose or fingers of gloves while they are being repaired.

For sewing down patches, running seams, and stitching generally, sewing cotton or sewing silk is used, black silk, however, being in most cases preferable to black cotton. The threads must be as fine as is consistent with strength, while a good quality is always desirable.

For linen goods flax threads can be used for patching and, on fine weaving, for darning; but the ordinary worker will find cotton quite as satisfactory in most cases and less fluffy in appearance than the flax.

The material used for patches should, of course, be as nearly as possible like that of the original article. Old linen and calico are preferable to new for the purpose. If a set of articles needs repair it is sometimes worth while to cut up one for new wristbands, pockets, and patches for the remainder. Failing old calico, the new piece employed should be slightly finer in quality than that on which it is to be laid, and should first be thoroughly scalded or even washed. It may also be rubbed with soap to make it rather softer to handle.

A patch must always be cut rather larger than the place which it is to cover, and the same way of the stuff as the fabric on which it is to be laid. This is most easily illustrated in a sheet where the selvedge runs down each side, and therefore down the outer edge of any patch let into it. The top

and bottom edges both of the sheet and patch put in these positions are usually hemmed.

In figured fabrics of every material the pattern should be matched exactly in laying on the patch. Thus the addition will not merely be rendered inconspicuous, but will, also, set well and flatly.

On plain fabrics patches should be square, or at least rectangular. But on figured textiles it is often allowable to curve them, for stitches show less in some parts of the pattern than in others; a broken line of them being also less noticeable than a straight one would be.

When silk and similar materials are too tender to bear a needle, or when stitches are likely to show, mending tissue is of service. It is a sort of rubber plaster, very thin, laid under a tear and melted into place with a warm iron

MENDING HOSIERY AND STOCKINGETTE GARMENTS.

Running.—It was formerly the custom of good workers to strengthen the heels, knees, toes, and elbows of hosiery by running extra threads in and out when the garments were new. In the present day only a few patient needle-women pursue this plan. Fine soft wool or cotton, according to the fabric of the garment, should be employed.

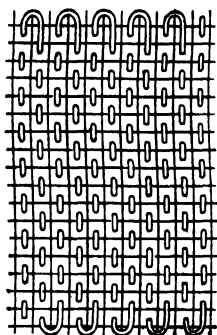


Fig. 382 — Running Stockings.

Turn the article to be strengthened the wrong side out, and with a threaded needle alternately take up and leave one thread, working in rows, and always raising in one row the strands passed over in the former one (fig. 382). Occasionally two threads are passed over and one is picked up for each stitch, the raised strand of the second and succeeding rows being the one immediately following that lifted in the preceding row.

The stitches are all made in one direction, and do not cross as in true darning. On coarse or medium material two threads may be lifted and left together. At the end of each row a loop of yarn should be left before returning the needle. This is to allow for shrinking, and to prevent the work from becoming a hard mass, unsightly and uncomfortable. Two threads of the weaving are left between each row of running, and the completed work should form a square, scarcely perceptible on the right side. The work must be held firmly over the hand, and attention must be paid to the regularity of the stitches and to the evenness of the rows. It is well to fill two or three darning needles before beginning.

Darning.—A darn is usually effected on the wrong surface of any article. For stockings and other garments that are slightly worn, form a row of threads over the hole by taking up the loops on each side. If the material round the hole is worn thin, begin half an inch to the left of the

hole, and the same distance below it. Take up one loop, miss one, and take up one again, carrying the darn to half an inch above the hole. In crossing the hole be careful to take up the loops along its frayed edge. Turn the work round and proceed to work across in the same manner, alternately taking up and leaving one thread. In each following row take up the threads missed in the previous one (fig. 383). Twilled fabrics should be mended with a cross darn. In this, upright threads are laid as usual, but those which cross them are taken diagonally, parallel with the rib of the textile (fig. 384).

A three-cornered tear in hosiery is mended by taking up at least two threads on the needle, and leaving two. Two threads of the material are left between each row of darning, and the corners and ends must be well protected by carrying the lines of darning sufficiently beyond them. The same rule applies to diagonal darns.

Grafting.—Grafting (fig. 385) is used to join two pieces of elastic weaving together. By its means stockings may be re-footed, or supplied with new toes and heels. To do this, ravel out the thread until a distinct row of loops on each piece of the stocking is obtained. Thread a wool needle, and work on the right side of the garment from right to left. The pieces must be held, one above the other, over the first finger of the left hand, and so arranged that the loops in the lower row are exactly opposite the spaces between the loops in the upper row. Secure the end of the wool on the wrong side, bring the needle through the first and second top loops, and then through the first and second bottom loops, and finally up through the second and third top loops, so that it passes through each loop twice. Fasten off, by running the end of the wool up and down on the wrong side. Be careful the thread is not too tightly drawn; on the other hand, if it is too loose, the join will be apparent.

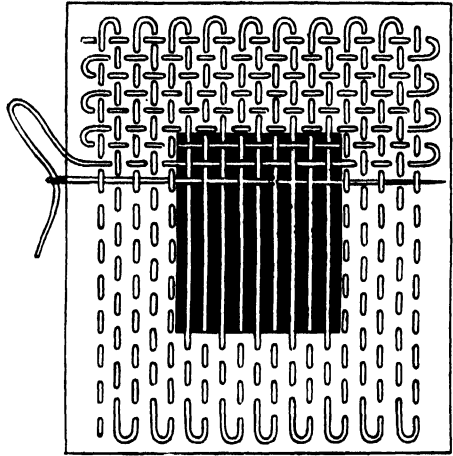


Fig. 383. - Darning.

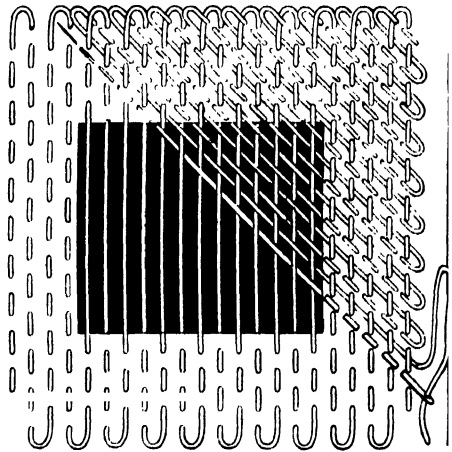


Fig. 384. - Cross Darning.

A Grafted Patch.—Where a very bad hole has been torn in a stocking, or any similarly-woven article, a piece of the same material may be laid underneath it and tacked securely in position. The torn part should be held over the hand, and the mending done on the right side. The needle should pass through each loop of the tear and, after each stitch, into the piece with which it is mended, at the extreme edge of the rent, the work



Fig. 385.—Grafting.

being carried evenly all round the hole. Afterwards the garment is turned on the wrong side, and sewn across in the same manner into the edges of the new material.

To Repair a Dropped Thread.—Where a stitch has been dropped, and what is known as a “ladder” has formed, turn the material on the wrong side and darn downwards three stitches outside the dropped one. Take up one stitch, leave one, and take up one again; leave a loop at the end of the row, and return, taking up the stitches that were previously omitted. Repeat this darning backwards and forwards until the weak place is sound; the tension of thread must be carefully regulated. In hand-knit and coarse goods it is better to pick up the dropped stitch with a crochet-hook, and, proceeding upwards, to work off each stitch in turn. When at the top of the “ladder” pass a threaded needle through the last loop and fasten off.

To Repair Vests.—Vests, combinations, corset covers, and other garments of woollen elastic weaving, whether of lamb’s-wool, fine merino, or natural wool, can be strengthened by running in the manner described for stockings; this should be done at the elbows, and round the arm-holes. When the material is very fine, it can be strengthened round the arm-hole by lining to a depth of three or more inches. For this purpose thin natural-wool flannel, lamb’s-wool, or llama can be utilized. Turn the garment on the wrong side, and adjust the addition by means of pins or tacking threads. When satisfactorily arranged, cut it to shape, and herring-bone neatly all round. It may be found advisable to run the top material to the lining. This is done on the wrong side.

When a hole appears in the elbow, cut a round of material, tack it under the place on the wrong side, herring-bone down firmly, turn on the right

side, cut the worn place out, and herring-bone down the edges of it to the new material.

In all patches and additions to stockingette goods allow ample room if flannel or any other straight-woven fabric is used, as this does not stretch as does the elastic weaving. Garments that have been pulled in wear and become too long in the arms, legs, or skirt can be made smaller by turning up the extra inches and herring-boning them back. The stitches must be somewhat closely set to keep all firm.

Cotton stockingette vests and other garments, if no material to match can be obtained, may be mended with white or unbleached calico of a loose make, or with flannelette or Canton flannel.

To Mend Flannel.—Straight-woven woollens, flannels, for instance, are easily matched. The patch is laid on the right side of the foundation and herring-boned, not hemmed, down with fine silk or with Saxony wool. The cut edges of the rent are also herring-boned into place.

A darn on flannel is effected, as on other fabrics, by means of straight rows of fine stitches. The edges of a very spreading tear may be drawn together first, to keep them in position.

MENDING CALICO UNDERWEAR.

To Patch Calico.—In preparing a patch for any article made of calico or print, take a section rather larger than the space to be covered. Fold this patch in half, and again in the opposite direction, slightly creasing it. The middle, where the marks cross, should be laid exactly over the centre of the hole. Make a turning

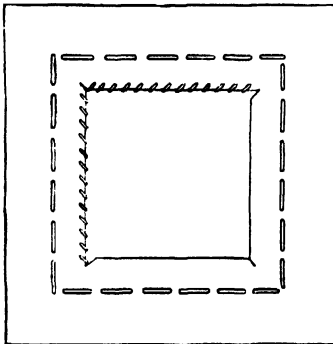


Fig. 386.—Calico Patch.

a quarter of an inch deep all round the patch, and notch the corners to make them set evenly. Place the work the right side downwards, and pin the patch in position. Fell it down all round on the wrong side, securing the corners evenly and neatly. Turn it

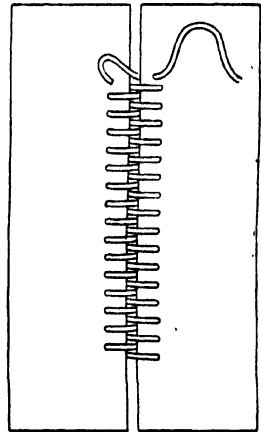


Fig. 387.—Antique or German Seam.

over on the right side and cut away the worn place, leaving a three-quarter-inch margin all round. Turn the raw edges of the margin under, stroking them into place with the needle, and then sew them down, being careful

not to draw or pucker the corners. To make them quite flat smooth them down with the thimble (fig. 386).

For small holes in calico a piece of tape makes a useful patch. The same material is often hemmed down over weak seams and slits.

To Darn Calico.—Calico is darned with soft cotton or flax threads, sometimes in plain “take-a-stitch-and-leave-a-stitch” darning, sometimes by means of the antique or German seam (fig. 387). If the latter method is decided upon, tack the edges together, bring the needle through two threads from the edge of the tear, insert it from below upwards under the opposite edge and two threads beyond it as before. Repeat the process across and across until the join is complete and a flat seam produced.

MENDING WOOLLEN DRESS FABRICS.

To Mend Cashmere.—Such material as cashmere, when torn, is best repaired by ravelling out the thread from a similar or, if possible, the same material, and using it to darn the material on the wrong side. To keep the edges of the material together, the rent should be caught together on the right side by means of a coloured cotton, which should afterwards be withdrawn. Darn very neatly, turn on the right side, and with sharp scissors trim away any ragged edges. Place over the darn a clean damp cloth, and over the cloth a piece of paper, and press with a hot iron. If carefully executed, the darn will not be visible. Alpaca can be mended with its own ravellings, or with fine strong silk; rough woolly serge needs fine angola, while firmer worsted serge needs fine yarn.

To Mend Cloth.—To mend cloth draw a hair through a piece of clean linen to make sure it is free from grease, and then thread a needle with it. Trim the edges of the cloth with a sharp pair of scissors, fit the edges of the cloth exactly together, and with a needle and white thread overcast them so as to keep them in position. Now pass the needle, threaded with hair, through the thickness of the cloth, the point towards the tear, insert it on the opposite side, draw through and insert again, the point again towards the tear. The hair, which should not be visible on the surface, must always be carried through the thickness of the cloth. When the work is finished lay the article, the right side downwards, on a table, damp, and cover it with a clean cloth, and press well with a warm iron. A darn cleverly made in this way with hair will defy detection, and will be much firmer than if silk is used.

MENDING SILK.

Draw together the torn edges, and, with fine sewing silk, tack a piece of soft silk over the back of the tear on the wrong side. Neatly darn the tear to this on the right side, and press with an iron when the task is completed. Silk thread similar in kind and quality to the material should be used throughout.

MENDING HOUSE-LINEN.

To Mend Bed-Linen.—The hints given for mending calico apply equally well to linen and cotton house-linen, such as sheets and pillow-cases which are not patterned. If a piece has to be added, it should be made of material as soft as that of the article itself, and it must be laid the right way of the stuff. Old sheets, past mending, make good pillowslips.

For small holes plain darning, with flax or Moravian thread or with mending-cotton, should be used.

To Mend Table-Linen.—Upon the appearance of a thin place in damask, it should be run on the wrong side with linen or flax thread. Darns are effected in the same way as on other fabrics, care being taken to copy the pattern. This is sometimes so woven that to ensure the desired effect diagonal stitches must be substituted for, or added to, those made at right angles. It may be necessary for the proper execution of the work to use threads of various degrees of fineness.

Form the warp or upright lines, first by running, beginning about three-quarters of an inch from the hole, take up one or more strands, missing an equal number; carry the thread straight across the hole, and continue backwards and forwards until the warp threads form a square covering the hole. Turn the work round and begin in the right-hand corner, taking up one, and leaving two or more threads, as the case may be. No definite rule can be given, but any pattern can be matched by counting the threads and studying the design and the fabric of the material needing repair.

Cross-cut Darn.—Darning a cross cut is easier if a piece of paper is placed under it on the wrong side. The edges may be drawn together with very fine cotton, in somewhat the same manner as described for the antique darn for calico, all raw edges being kept on the wrong side (fig. 388). Make a crease across the material about a quarter of an inch above the top of the cut. Make another crease at the right side of the first crease, continuing until within a quarter of an inch of the bottom end of the cut. Begin to darn at the top right-hand corner, taking two threads on the needle and missing two. When the end of the crease is reached, count the number of stitches on the needle, and take up the same number of

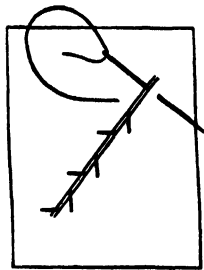


Fig. 388.—Cross-cut: edges drawn together.

stitches below the fold. The next row is begun two threads from the first and two threads above it, those that were omitted in the previous row being raised. A short loop should be left at each end. Darn across the cut and bring the strengthening as far beyond the top of the cut as below it. The darn should show an equal amount of stitches on each side

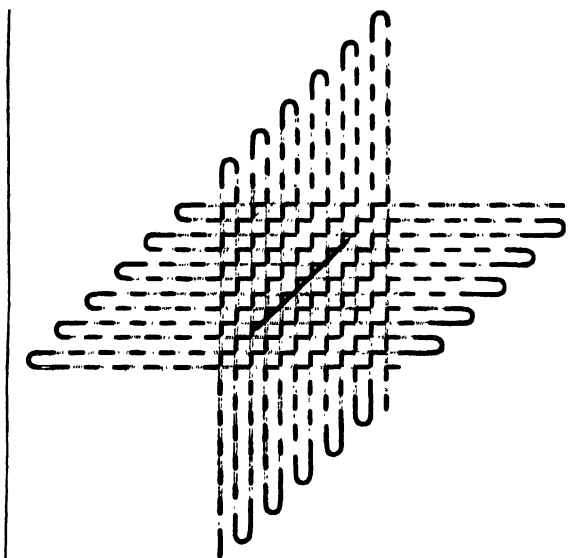


Fig. 389.—Cross-cut: darn completed.

of the cut. Turn the material round and work across. (Fig. 389 shows completed darn.) Small holes in dinner-napkins and d'oyleys may be repaired by plain darning. For large rents, the pattern of the damask should be copied as nearly as possible.

To Mend Towels.—Linen towels should be mended with fine flax thread, handsome-patterned damask being copied in plain darning. Honey-comb and huckaback towels are best darned with fine soft cotton. Rough bath towels of unbleached material need mending with soft unbleached flax.

When the fringe of towels becomes worn and ragged, it should be neatly trimmed off, and the edges turned down with a narrow hem.

To Mend Kitchen Cloths.—Crash round towels and china cloths, if of good quality, may be patched, and if the patches are firmly tacked into position they can be secured by the aid of a sewing-machine.

To Mend Curtains.—A darn, however neatly executed, does not look well in lace or net window-curtains. It is better to draw the holes together with suitable thread before the curtains are washed, being careful not to pull them out of shape. When the curtains are up, the stitches can be strengthened with fine strong cotton. A patch, merely starched and ironed over the rent, is as good as a darn and less perceptible.

Guipure curtains made up with insertion can be most successfully repaired by removing all damaged parts, letting in a fresh piece matching the pattern accurately, and grafting or darning the new part to the old. The plain portions of such curtains can be mended by darning with suitable thread. Fine knitting-cotton is useful for darning coarse guipure. In repairing muslin, draw the torn edges together with sewing-cotton, and then darn backwards and forwards over the rent.

White dimity curtains can be mended with fine flax or soft cotton. For cotton quilts, take double threads of soft cotton and form a background on the warp of the material. This completed, darn across with a single thread, copying the pattern as nearly as possible.

MENDING ODDS AND ENDS.

To Sew on Strings.—Strings and suspension loops of tape, ribbon, or binding should be sewn on with strong thread. To sew on a string, lay it on the garment in the opposite direction to that which it is finally to take, and with the end about half an inch away from the edge of the stuff. Stitch it down, working straight across it near the end, then oversew the cut edge and its sides (fig. 390). Turn the string back into its proper position, run a line of stitches across it to secure it near the edge of the garment, and bring a second line down near the end of it, close to the first stitches (fig. 391).

Some workers hem the ends of strings, especially of those made of braid, which are apt to fray. Tape and ribbon, if cut across diagonally, do not need this attention.

Suspension loops are sewn down much in the same way as strings. Sometimes the two ends are separated; but, in the corner of a cloth, for instance, it is better to lay them side by side, or even slightly overlapping, and to stitch them down as one width.

To Sew on Buttons.—In putting linen buttons on fine or thin fabric it is well first to strengthen the foundation. For each button cut a circular piece of tape or calico, turn in the edges, and sew with fine stitches on the wrong side of the material. Then place the button on the right side in the middle of this, and sew through the double fabric. Bring the needle up through one of the holes in the button, pass it back through the other hole,

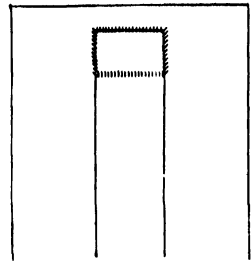


Fig. 390.—Sewing on Tape: first position.

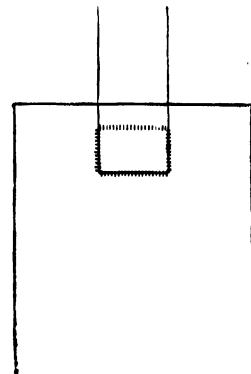


Fig. 391.—Sewing on Tape: complete.

repeat four or five times; finally, bring the needle from the wrong side up under the button, twist the thread round and round the stitches three or four times between the base of the button and the fabric, pass the needle back again to the wrong side, and fasten off. Linen buttons, pierced with four holes, can be sewn down with stitches arranged either as two bars or as a cross.

Buttons entirely covered with linen can be sewn down with a tiny circle of back stitches carried round close to the centre, or with longer stitches arranged to form a cross or star. In either case, the thread must not be drawn tightly, or when it is strengthened by a twist taken round and round under the button to form a sort of small stalk, the material will be dragged. Buttons on dresses, coats, and other outer garments should always be finished off in this manner, to afford a little elasticity.

Buttons with a shank can be simply thrust through the garment for a short distance and secured by a tape run through the shank and sewn down at the ends. Additional firmness is given by taking a few stitches through both shank and tape. Glove and boot buttons can be put on in this way, but on thick boots it is usual to sew on each button singly with strong waxed thread.

To Sew on Hooks and Eyes.—In sewing on dress hooks the shanks should be neatly buttonholed to the material, the body of the hook being also caught down with stitches. Some hooks have perforations up the side, and if sewn down through these do not slip, as ordinary hooks are apt to do. Eyes are similarly fastened. Good dressmakers buttonhole them over with silk matching the garment in colouring. The small rings sometimes

used instead of eyes are worked over with silk and sometimes caught down by a narrow ribbon threaded through them.

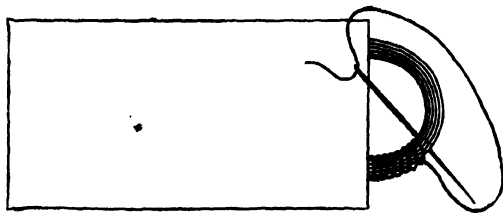


Fig. 392.—Method of working Loops.

To Work Loops.—To make a worked loop on a dress, bring a needleful of silk twist up from the wrong side, and on the

right side make about six straight stitches, rather wider than the hook which is to pass over them, and all exactly in the same place. Then, beginning at the first starting-place, work over all the strands together to form them into a close band of buttonholing. At the farther end return the needle to the wrong side and there fasten off (fig. 392).

To Mend Gloves.—The seams of kid gloves should be neatly restitched, when necessary, with cotton, which is less conspicuous than silk for the purpose.

Silk gloves can be darned on the wrong side, and patched if necessary.

Kid gloves are difficult to patch, but a slit which cannot be drawn closely together without risk can be delicately mended in open work, with

fine silk of a proper colour. A row of buttonholing should be taken along each side of the rent, and these rows then buttonholed closely together. In the case of a very bad tear, it may be advisable to have a second and third row, inside the first, each stitched to the one outside and not entering the kid at all, but this is seldom necessary. The stitches should be an eighth of an inch apart, and the rows of about the same depth. The result, if the tension is even, should be a small net-work of lace stitches, not unornamental, even should they become visible.

THE CARE OF CLOTHES.

Cloth.—All cloth garments should be thoroughly brushed each time after wearing: for this purpose suitable brushes should be provided, a whisk brush, hard and medium clothes-brushes, and a soft brush for velvet. Fine cloth must be brushed lightly, a somewhat soft brush being used for the purpose. Lay the garment flat upon a large, perfectly clean table, and brush carefully in the direction of the pile, removing spots of mud with the hard brush. Coats, waistcoats, jackets, and similar clothes should all be folded carefully after being brushed. Trousers should be put in stretchers, or if these are not to hand, should be folded carefully down the front of the leg, pulled out straight, and folded over. Their neat appearance is greatly improved if, when they have been folded down the front of the leg, a damp cloth is laid on them and carefully pressed with a warm iron. This effectually prevents a baggy appearance at the knees.

To remove a grease spot, place a clean piece of blotting-paper over it and press with a hot iron. The operation should be repeated until the spot has disappeared. Grease on the velvet collar of a coat can be removed by rubbing gently with a piece of clean linen rag thoroughly wetted with alcohol.

Paint or grease can generally be removed from garments by dipping a piece of clean flannel into a little turpentine or benzine and rubbing the garment with it. The rubbing should be in a circular direction, gradually closing in towards the centre of the spot, or the grease may spread. Old paint spots, though rather difficult to deal with, may sometimes be removed by the following method:—Pour a small quantity of pure turpentine on the spot, and when the paint softens, scrape it off with a paper-knife. Paint spots on velvet or velveteen can generally be taken out by applying pure alcohol or paraffin.

Tar is most difficult to get rid of. The only successful way is to rub the stains with a little fresh butter or grease. To remove the grease spot caused by the butter, use a piece of blotting-paper and a warm iron as before directed.

Ink stains need treatment at once. If they are allowed to remain, it is almost impossible to do anything with them. When ink has been spilt, it

can often be absorbed by blotting-paper, a fresh piece being used as soon as the first becomes saturated. Sponging with milk until all the ink is removed is sometimes effectual; the stain should afterwards be well washed with clean hot water, rubbed until dry with clean rubbers, and if possible pressed on the wrong side of the fabric with a warm iron.

Cloth clothes of black or dark-coloured material that have become dirty and shabby may be to a great extent renovated by the following process:—Take a piece of rock ammonia of the size of a hen's egg, cover it with one pint of boiling water, and when it has cooled a little, apply it evenly with a sponge, carefully rubbing any spots; hang the garment in the air in a shady place; when it is nearly dry, press carefully with a warm but not too hot iron, the surface of the cloth having been first covered with smooth, thin brown paper. If carefully treated in this manner the clothes look almost like new.

To restore faded and soiled dresses of serge, cashmere, and similar stuffs, allow a good handful of fig-leaves (which can be obtained at a florist's) to simmer in two pints of water for ten minutes, and strain the liquid when somewhat cooled. Sponge the dresses with it, making them thoroughly wet all over; then hang them in a shady place to dry, and while they are still damp, press on the wrong side with a warm iron. All dust should have been previously removed by a thorough brushing.

Rusty black garments that are in too bad a condition to be improved much by the ordinary methods may be successfully re-dyed at home. Black socks, stockings, gloves, if made of silk, cotton, or Lisle thread, can be treated by boiling them in a decoction of logwood chips.

Spirits of ammonia and benzine should find a place in every housewife's cupboard. They need, however, very careful storing, the former being of a somewhat explosive nature if shaken, and the latter highly inflammable if brought near a naked light. Spirits of ammonia can be diluted with either hot or cold water, and may be of service in many ways. Added to the water in which flannels are washed, ammonia renders them soft and helps to preserve their colour. Scrubbs' liquid ammonia is a useful preparation.

Silk and Velvet.—Garments composed of silk or velvet should be gently brushed and then wiped with a soft piece of flannel before being put away. Black silk that has become soiled and greasy in appearance may have much of its original beauty restored by careful sponging with the solution of fig-leaves already mentioned. Ammonia is also of service. Gum arabic is used to give a degree of stiffness to silk that has lost its substance and become poor in texture. Sponge the silk on the wrong side with the liquid gum thinned with cold water; let it get nearly dry, and then press on the wrong side with a warm iron. The following is a good way of cleaning silk dresses and ribbons. In a clean enamelled pan place one quart of soft water; add a quarter of a pound of soft soap, set the pan over the fire, and let it boil up well. Remove and whisk thoroughly until a fine lather is obtained; to this, when nearly cold, add one quarter of gin. Fill another pan with cold soft water, to which has been added a handful

of salt and a tea-cupful of good vinegar. After brushing the silk well to remove all dust, sponge it thoroughly on both sides with the lather, put it into the cold water for five minutes, hang it on a clothes-horse to drain well, roll it in a clean cloth, and finish by ironing on one side only with a cool iron.

White silk, when soiled, may be cleaned by rubbing with stale bread-crumbs to which a very little powdered blue has been added. Rub thoroughly but gently all over the soiled portions, and wipe off the crumbs with a fine linen handkerchief.

The pile of velvet may be restored by steaming. Hold the wrong side of the velvet over a large jug containing boiling water, or pass the wrong side smoothly over the face of a hot iron set upon an iron stand.

Lace.—To clean white lace and make it look new, cover a small piece of board neatly and tightly with fine white flannel, and prepare a lather of warm soap-suds. Tack the lace in folds round the board, securing every point, cover it with a piece of clean muslin, dip it in the lather, rub it thoroughly but gently with the hand, press it to remove all soap, rinse, and pass it quickly through very weak blue water to which has been added three lumps of loaf-sugar. Set the lace in a shady place, and when it is thoroughly dry, unpick it carefully, and pull it out. If necessary it may be ironed with a cool iron.

Soiled lace can be washed in warm soapy water, rinsed, and then retinted, if necessary, either by dipping in a weak solution of coffee or by means of any of the tinting preparations advertised.

Other Materials.—Cashmere, serge, or other woollen materials require to be thoroughly brushed with a brush of medium stiffness; a whisk brush will be found very serviceable. For softer materials, such as delaine, llama, and nun's veiling, a good shaking in the open air will generally suffice. Light-coloured cashmere and delaine may be most successfully treated by washing in a warm lather, to which has been added a small quantity of liquid ammonia. The garments should be briskly moved about in the water, pressed, and rubbed gently. When all dirt has been removed, rinse them in warm water to which a little blue has been added. Do not attempt to wring the garments, but, after squeezing them slightly, hang them out at once in a shady place. Press them with a moderately warm iron on the wrong side before the material is quite dry.

Dresses that are composed of light materials and are only slightly soiled can often be cleaned by rubbing the soiled portions with stale bread.

Gloves.—White silk gloves should, if possible, be washed on the hands, soap and warm water being used for the purpose. Rinse them through warm water, to which a very little blue has been added; remove them carefully from the hands, pull out the fingers; fasten them with two or three needles to a clean cloth, and place them in the air to dry. Ironing is not required. To wash cotton gloves, tack them together, wash them in the usual way, and boil them in water to which a little shredded soap and also a few drops of ammonia have been added. Rinse, dry out of doors,

and press them with a warm iron, having first thoroughly pulled them into shape and laid a clean handkerchief over them.

Cleaning gloves at home is somewhat troublesome and unsatisfactory. Professional cleaners charge so little, and generally do their work so well, that it is, as a rule, better entrusted to them. To clean white kid gloves, dip a piece of flannel in benzine, and, beginning at the tips of the fingers, gradually work down to the wrist, until every part is perfectly white. As the smell of benzine is somewhat objectionable, the gloves should afterwards be laid on a clean plate out of doors for an hour or so. A sachet scented with orris-root or petal-dust is useful to keep gloves in; it effectually neutralizes the smell of benzine.

A patent glove-cleaner made of a species of rubber is obtainable, and is of service in removing dirt from light gloves that are only slightly soiled.

Black kid gloves that have become worn and shabby will be greatly improved if treated in the following manner:—Apply with a small brush a mixture of ten drops of jet-black ink to one small tea-spoonful of olive-oil, and place the gloves in the sun to dry. A second or even third application may be necessary. The wearing period of black gloves may be lengthened considerably by care in putting them on. When they are well on, take a tiny piece of fresh butter and rub them all over. Remove them carefully, pull them into shape, and remove any superfluous grease with an old handkerchief. Gloves treated in this fashion will look well to the last.

Hats.—Silk hats, if in a very greasy condition, may be gently wiped with a soft silk handkerchief just moistened in a somewhat strong solution of ammonia, one tea-spoonful of the spirit to one gill or rather more of hot water. They must, of course, be wiped with, and not against, the nap, round and round, until all grease is removed. The process should be finished with a hat-iron. Black felt hats are also cleaned with ammonia; a little pure alcohol may be used for the binding, band, and brim if they are very soiled and greasy.

Straw hats, if black, can be renovated by applying a mixture composed of equal parts of gum and ink, using a small firm brush for the purpose. This method is most useful in the case of chip and fine straw hats.

White straw hats may be scrubbed with a warm lather of soap, a fine brush being used for the purpose. They should afterwards be rinsed well with clean warm water to which a small quantity of salt has been added. Rubbing with a cut lemon will suffice for hats that are not very dirty; they must be well rinsed in cold water and stiffened with a solution of gum and water applied with a brush.

Hats that are too shabby or sunburnt to clean may be successfully treated with hat paint, which is to be procured in any colour.

Feathers.—Feathers, if dirty, may be washed in a lather of soap. Draw them through the fingers in the water, shaking gently; dry in the sun or before a fire, and curl with a paper-knife. If they look poor, it is better to send them to a professional feather-dresser, who, for a small sum, will place two or three poor feathers together to make one good one. They can be

died almost any colour. Swansdown or any white fur is washed in the same way as feathers, but needs to be gently shaken before a fire until dry and fluffy.

Flowers.—Artificial flowers that have faded may be restored to their original tints by means of dyes; if they are limp, holding them over the steam of boiling water may suffice to freshen and stiffen them.

Umbrellas and Sunshades.—Umbrellas, when wet, should never be left open; they should be placed handle downwards to drain. To stand an umbrella upright when wet is to allow the moisture to sink into the frame, and thus cause both frame and material to rot.

Umbrellas and sunshades, when not in use, should not be tightly rolled, as this strains the silk, causing it to crack and split. A good plan is to provide a holland bag, the length of the umbrella, handle included, having a flap, with button and button-hole, to fasten over the top, and thus keep out all dust. It should be wide enough to hold the umbrella easily, and should be provided with a loop at the top, by which it can be hung in a cupboard. Sunshades may be put away in this manner at the end of the summer, after having been well brushed, repaired if necessary, and carefully enveloped in silver paper.

Umbrellas need to have the silk carefully brushed and wiped with a piece of soft flannel at frequent intervals to free them from dust, which soon renders them shabby.

Black sticks of umbrellas which, through constant use, have become scratched and worn, can be improved in appearance by the judicious application of a little ebony stain.

A good plan for those who travel daily by train is to have a small silver band engraved with their address and fixed round the stick just below the top point of the ribs, where it can easily be discerned by anyone opening the umbrella.

Mackintoshes.—A mackintosh, when not in use, requires to be hung up in a warm, dry place. It will speedily be ruined if put away rolled up. After having been wet, it should be spread out carefully to dry, over a line in the open air if possible, but never near a fire, otherwise it will become sticky and smell unpleasant.

Tweed-faced mackintoshes should be brushed thoroughly free from all mud. If the gray inner side is soiled, it should be sponged with tepid soapy water, wiped dry with a clean cloth, and hung up in a current of air. Stains may sometimes be removed by the application of a little alcohol, but it is often difficult to get them out.

White, shiny mackintoshes (which are not very general in these days) should, when soiled, be laid flat on a table and thoroughly washed with a flannel and soap and water to which a little ammonia has been added. The soap must be removed by rinsing well in cold water. If possible, spread the mackintosh out over two lines in a shady place, in order that the air may get to it as much as possible and dry it quickly and thoroughly. Small tears in mackintoshes can be repaired by drawing the edges together

at the back with black sticking-plaster. Marine glue is of great service in mending mackintoshes that have come undone at the seams; in fact there are few things for which it cannot be utilized. It is obtainable at most chemists, and only requires melting to be ready for use.

PUTTING CLOTHES AWAY.

Muslins and all starched goods should be put away rough when done with. Wash them thoroughly to free them from all starch, rinse well, and if they are white, dip them in blue water to preserve the colour. Dry them very thoroughly, otherwise they will rot and mildew. It is advisable to use a fair amount of blue for any cotton goods that have to be put away.

Light silk dresses require to be carefully brushed, and then wiped with a clean soft handkerchief. Any necessary repairs should be done and all made neat and trim. Layers of tissue-paper should be placed between each fold, and the garment, if a skirt, slipped into a calico bag large enough to hold it easily. It will be an advantage if the bag is provided with two strong loops, and hung by them in a roomy cupboard. The band of the dress may be fastened to the bag inside with safety. Bodices require to be covered with soft paper and the sleeves to be plentifully stuffed with it to retain their shape. They must then be carefully folded and securely enveloped in a clean thin cloth. Lace hats should have bows and feathers removed if they are not likely to be required for some time. The loops of bows need supporting with soft paper; the whole can then be secured in a large sheet of tissue-paper and placed in a large box kept for the purpose. Flowers must be well brushed to remove all dust; if faded, their colour can be restored, as has been already mentioned. Feathers need to be shaken to remove any dust; they can then be lightly curled with an ivory paper-cutter or a blunt penknife.

Cloth articles, after being brushed, mended, and pressed, should be well sprinkled with naphthaline, folded neatly, wrapped in a clean cloth and then in brown paper, which should be fastened with sealing-wax.

Gentlemen's dress clothes, if not frequently worn, may be sprinkled with naphthaline and stored in a strong box, with tiny strips of Russia leather placed amongst them. Tar-paper is also of service placed in strips amongst thick garments.

All fur must be thoroughly dry before being put away, since dampness is a fruitful source of moths. In order to dry them, place the garments out in the sun, beat them with a little stick to remove all dust, sprinkle them well with cayenne pepper, and sew them up in strong brown-paper bags.

Furs may be cleaned by rubbing with fig-dust (obtainable from a corn chandler), shaking well, and beating out thoroughly with a stick.

General Advice.—All clothes should be brushed and neatly folded each time after wearing. Treated in this manner they will look well and wear

much longer than if carelessly hung on pegs and allowed to form creases. In the case of jackets worn in the rain, it is wise to wipe them with a clean dry cloth and arrange them on a chair, so that each portion may hang as smoothly as possible. Garments that have become creased will be restored to their original freshness if well aired in front of a fire; and if they are in a very bad condition it may help to press them with a warm iron.

BOOTS AND SHOES.

Boots and shoes are among the few necessities of life that it is quite impossible to manufacture at home. They constitute a large item in the dress expenditure, both to buy in the first instance, and to keep in repair afterwards. Still, ill-shod feet may be the cause of consumption to delicate persons, and, therefore, every member of the household should out-of-doors wear strong, serviceable boots and shoes. To have neatly-shod feet is a mark of a well-dressed person, man, woman, or child, and it is proverbial that a lady is known by her boots and gloves.

All persons, except only the poorest, aim also at elegance in their boots and shoes, and this is often attained by much agony from wearing tight boots, and, medical men say, irrevocable injury caused by what are called "French heels". Both beauty and utility may be attained by those who select their boots with care, know exactly what they want, and go to a bootmaker willing to take the trouble to fall in with the views of his customers.

Every person should have three pairs of outdoor boots or shoes in wear, one pair for better occasions, and two every-day pairs (to wear alternately), so that each pair may be repaired when necessary without inconvenience, and when wet may be dried thoroughly before being worn again. Of house shoes there should be at least two pairs (and three are better), one for best and one for ordinary wear. The outdoor shoes should be changed for house shoes on coming in, to keep the carpets free from mud-stains, to rest the feet, and to ensure that no cold is taken by wearing damp boots.

Ladies' boots and shoes are made of calf kid, glacé kid, patent leather, Russia leather in shades of brown and tan, buckskin and canvas, doeskin, and morocco. For strong feet stout boots are suitable in winter, but persons with tender feet find leather too hard, and should wear calf kid. It is a dull, rather strong leather, which wears well, but is much softer than "blacking leather". Its disadvantage is that it easily stretches and goes out of shape. Glacé kid and patent leather are the prettiest and most expensive material of which ladies' outdoor boots are made. Some cycling shoes are made of horseskin, and very light ones of chamois leather lined.

Evening shoes are rather expensive, as they require more decoration than house shoes. White satin shoes dye either in black or in colours, but shrink a little in the process.

The Purchase of Boots.—A large number of materials are now used in the making of boots. The hard, stiff, blacking leather of Victorian days is seldom seen. Calf, kid, horseskin, Russia, canvas, drill, and, for uppers, antelope skin, are among those used for men's boots. Sandals for men, women, and children are made in Russia calf or in drill. All the best boots are hand-made. The kid is softened by manipulation, hardened by machine-stitching. Owing to the length of time required for its preparation, leather can never be a cheap article, and consequently good boots and shoes are always somewhat expensive.

Buy boots only when required. Boot sales are usually undertaken to dispose of what are called "out" sizes, either very large or very small sizes, which must be kept in stock for the abnormal individual, and are of very little use to the ordinary customer. Boots, unlike drapery, change very little in fashion, and rather improve than not by keeping if well attended to, and therefore the prices at sales are not sufficiently reduced to make it advisable to buy only on the chance of the article being required.

Boots are much more satisfactory when made to order than ready-made, but are more expensive. A model boot has a broad sole, a square toe, and a low heel. Men's boots often fulfil these requirements, but women's boots are apt to err on the side of pointed toes, narrow soles, and high heels. The shape of the foot should be taken on a piece of paper, the person standing upright, when the foot spreads out to its natural size. The outline of both feet should be thus traced, as few persons have both the same size, the left being usually the longer.

Gentlemen's boots in a good make, hand-sewn, cost from £1, 5s. to £4, 4s. per pair; the machine-sewn cost somewhat less. Gentlemen's shoes cost from 12s. 6d. to £3 per pair; gentlemen's house shoes from 7s. to 25s. Inferior boots and shoes can be bought for much less than the prices quoted here, but are very unsatisfactory. In boys' and men's boots there is considerable variety, and of girls' and ladies' boots the choice is almost limitless.

Children's feet are very easily deformed for life by tight shoes or boots. They feel pain but cannot explain where nor why. Therefore, it behoves the parents or guardians to be most careful as to the comfort and good cut of the footgear. The best way to secure this is to go to a good maker, and always have boots made to measure and handsewn. Machine-sewing makes the kid or leather hard and unyielding. Hand-sewing is more expensive, but well worth the extra money in comfort and in eventual economy, not only for the wear of children but of adults.

Girls, so long as they are not full-grown, should never be allowed to wear any but flat heels, as high heels prevent the development of the muscles of the feet and ankles, throw the spinal cord out of its proper position, and interfere with a free carriage in walking. It has been, and by some still is, thought necessary for a girl to have heels on her dancing-shoes. This is a mistake; the feet are used more gracefully without them. As soon as a child feels its feet in the least cramped by a pair of shoes, they should be replaced by a larger pair. Ankle-straps prevent the

inelegant and not uncommon habit of slipping off the shoe. If the shoe when bought is a size larger than is required, so as to allow for growth, a strap, or substitute of elastic, is necessary. Shoes and gaiters are warmer, and protect the feet better in bad weather, than boots. For girls with short skirts the gaiters should be well up the calf of the leg. Laced boots permit of a little expansion in the front as time goes on, and therefore are neater than buttoned boots for growing children.

Ladies' Boots.—Ladies' boots are made with square toes, medium toes, and pointed toes. The square toes are certainly the most comfortable, but, according to present ideas, unbecoming. Pointed toes may be worn without inconvenience if the shoes are bought one or two sizes larger than is otherwise taken, so that the pointed toe is practically unoccupied by the foot, while the extra length is scarcely perceptible, as it is the point which is usually noticed and seldom the whole length. The point should not be in the middle of the sole but somewhat on the inside, so that the great toe may be in a straight line from the inside of the foot and not pushed outwards. Neglect of this causes a swelled and inflamed toe joint, which is a most painful complaint.

Heels may be worn without much harm if they do not go under the sole of the foot, as they mostly do, but are kept in their proper place as heels. Persons who have a good instep, that is, a well-arched foot, do not require heels to improve the appearance of the foot; a high instep has the same effect as a flat foot wearing a high heel. Boots with heels require to be longer than those without or with little heel, as the raising of the heel causes the toes to be thrown forward in the boot and to press against the end, which soon becomes painful. It is worth a little judicious care and thought to secure boots that are both graceful and comfortable.

In wet weather thick soles are more important than strong upper leathers, and persons with tender feet will find that stout soles on comparatively thin leathers will be an efficient protection. An inner sole of cork keeps the feet warm and dry, and if there is not room for this, "loofah" soles occupy but little space and are a preventive of damp.

Goloshes.—Goloshes, which are overshoes of india-rubber, are now obtainable in very light makes. There are two kinds, those which cover the foot as far as the heel, and are there attached by an elastic, and those made to slip entirely over the boot. The former are very light and easily removed, and can be carried when not required, but are an inefficient protection in prolonged wet weather. The latter keep the feet very dry, but should not be worn for long, as they prevent the evaporation of perspiration from the foot and render it much more liable to chilblains and kindred ailments. Goloshes cost from 2s. 9d. to 4s. 6d. the pair.

Snow Boots.—Snow boots, which are made with india-rubber soles and cloth tops, are slipped over walking boots; they are intended to keep the feet dry in the snow, and also to prevent slipping. They must be large enough to slip over the walking boot and fasten with a clasp. They are of comparatively recent introduction into this country, but save both boots and

feet in the snow, and quite repay the expense of purchase. Snow boots cost from 7*s.* to 12*s.* per pair.

Care and Repair of Boots.—All boots and shoes need to be thoroughly dried after having been worn in either rain or snow. A little care and attention causes them to wear and retain their shape much longer than if neglected. Avoid placing them close to a fire while they are still wet, or they will become hard and shrink so as to be unwearable. Thoroughly wiping all over with a rag dipped in linseed-oil tends to keep them soft. Walking-boots should on no account be worn in the house, but should be changed at once on returning from a walk, and, when practicable, placed upon proper boot-trees. Boots should be purchased some months before they are to be worn, and should have a little good vaseline rubbed over them and round the soles. They should then be stored in a dry cupboard until required.

Creaking is invariably a sign of bad make. A liberal application of oil is sometimes found efficacious, but the fault is generally in the sole of the boot and the manner in which it is put together.

Good oil-blackening should always be used for **leather boots**, and a little vaseline applied from time to time tends to keep the leather soft, and improves the polish. Glacé and kid boots should first have all dust and mud removed by wiping with a slightly damp cloth; a little milk or cream should then be applied with a piece of soft sponge, and the boots finally polished with a soft, dry cloth.

Patent boots need, when new, to be cleaned with milk. When the first gloss has worn off, it can be reproduced by the aid of any of the numerous varnishes specially sold for the purpose; these can be purchased very cheaply, certainly for less than they would cost to make at home.

After carefully removing all dust and mud from **tan boots**, they may be rubbed all over with the inner side of a banana rind or with a slice of orange, and polished with a soft cloth. If this be not convenient, russet cream may be used; it can be purchased in small bottles, and should be applied with a soft sponge. Polishing with a soft cloth should follow. Boots should always be cleaned on trees; where these are not to hand, all boots and shoes that have been worn in the damp should be stuffed with paper when taken off, to prevent shrinking. **White canvas and drill shoes** need to be cleaned with either pipe-clay or whiting, crushed to a powder, and mixed with cold water to the consistency of cream. It should be applied as evenly as possible, and the shoes should afterwards be set out in the sun. When they are quite dry, all superfluous powder may be removed with a firm white brush. White kid shoes can be cleaned with patent dressing sold for the purpose.

To render boots and shoes waterproof, rub them thoroughly all round the soles and along the seams with good dubbing. Mutton fat, if warmed, will do almost as well. Boots treated in this manner are impervious to snow.

Boots and shoes last much longer when kept in good repair; at the first

symptom of wear the heels should be renewed, or the shoes will soon be trodden crooked, and will never recover their former shape. Small pieces of iron, on the side prone to wear, effect a great saving in heels, but the ringing noise made on the pavement is disagreeable, and this economy is best reserved for boys' shoes. Button fasteners can be inserted very easily, and it saves much annoyance to have all buttons thus attached before beginning to wear new boots. There are various ways of tying boot-laces, which are recommended as infallible for keeping the ties secure. Lace fasteners may be bought from 2*d.* a pair, or a small black safety-pin may be inserted so as not to be noticeable in the lace.

HOME DRESSMAKING.

SYSTEMS.

The word "system" was originally applied to any method of dressmaking worked out and completed on scientific principles; latterly it has been narrowed down to mean any given manner of drafting or drawing out patterns on a scientific basis. These systems are worked out for individual figures by means of measurements taken directly from the person, and in themselves they are valueless without a knowledge of the details of making.

Scientific drafting and making will fail without practice and aptitude. Purely theoretical dressmaking can never be successful, as no two persons are identical in figure or in general appearance; but the difficulties and intricacies of the practical work will be very considerably lessened, and method and economy promoted, by a good foundation in the science of proportion, cut, style, and other points. A good pattern drafted to suit any individual figure will allow greater economy in cutting, will prevent much misfitting, and consequently will save much time in the making up of the garment. But rigid adherence to any one system for all figures will probably prove unsuccessful; not that it will necessarily produce a misfit, but possibly the form or the beauty of the outline of the dress may not be suitable to the particular person, and the general appearance will be wooden and inartistic. The knowledge of how to utilize any system can only be gained by practical experience, and it is this which usually distinguishes a professional dressmaker from an amateur.

Numbers of systems have been, and are still being constantly, invented, each one claiming some advantage over its predecessor. A good system should provide length and width measurements for both the back and the front of the dress, as women's figures differ so much in this respect, and are seldom in strictly correct proportion. Graduated tapes or part measures, used so successfully for men's tailoring, will only answer for women provided additional test measures are taken for back and front proportions.

Systems may be divided into two classes, those with charts and those without charts. The charts or guides are usually made of thick cardboard, with directions for use printed on them. Their great advantage is that they provide curves for drawing the various rounded parts of the patterns, and in many cases set tables which regulate the divisions of the measurements,

rendering calculations unnecessary. Their great drawbacks are the initial cost—2s. 6d. to 5s. being the average price,—the amount of space they require, and the difficulty of carrying them from place to place. Educationally, systems without charts rank higher, as they do much to develop the mastery of principles of proportion and calculation, besides training the eye. The power of observing quickly and accurately relative size, straightness, and general contour is of paramount importance in good dressmaking, and any exercise which will develop it is to be highly commended.

Centres for instruction in these various systems are formed in most towns and villages, the classes being conducted by certificated teachers. The following are recognized systems:—

I. Without Charts.

- (1) *Grenfell*. Published by Longmans, Green, & Co., London; 1s. 6d.
- (2) *Tailor Systems*. Published by the John Williamson Co., 42 Gerrard Street, London, W.
- (3) *Guerre System*. Book of instructions and diagrams, 1s. 6d. The John Williamson Co., 42 Gerrard Street, London, W.
- (4) *Fox's Square*. 1s. 158 Sauchiehall Street, Glasgow.

II. Chart Systems.

- (1) *Anglo-Parisian*, by C. H. Sparrow, 35 Chiswell Street, London, E.C. Price of Chart, 5s. Directions for use not published.
- (2) *Cosmopolitan*, by Mrs. Hollinrake, 78 King's Road, Camden Road, London, N.W.
- (3) *Rodmure*, by Joseph Fox, 158 Sauchiehall Street, Glasgow. Price of Chart with book of directions for students, 3s. 6d.

ADAPTATION OF PATTERNS.

Paper Patterns.—Home workers who are unable to study any system, and merely wish to make simple fitting garments, may acquire much of the practical art of dressmaking by using the cut-out paper patterns which can be procured from various periodicals and dressmaking establishments, but many of them will need adapting to suit special figures.

The following diagrams show how this necessary alteration or adaptation may be effected.

Fig. 393 (a) shows how the back may be shortened by a tuck placed across the middle of the back.

Fig. 393 (b) shows how the back may be lengthened by being cut across above the waist and raising the upper part till the required length is obtained.

Fig. 393 (c) shows how the width of the back may be increased by adding an equal turning at both sides.

Fig. 394 (a) shows how the front may be shortened, and where to place the tuck.

Fig. 394 (b) shows how the front may be lengthened or widened by

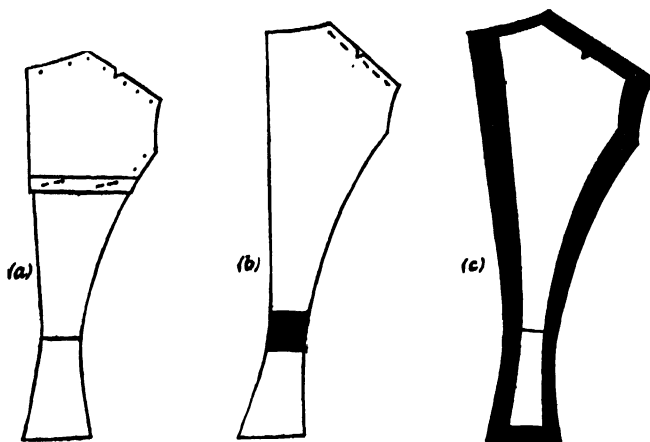


Fig. 393.—Altering Back (a) Shortening, (b) Lengthening, (c) Widening.

raising the shoulder and adding to the under arm. A slight addition may also be made at the front.

Fig. 395 shows the method of altering sleeves, and this is so clearly depicted on the diagram that it will be unnecessary to give any further directions. Care must be taken in lengthening or shortening the sleeve that the quantity removed or added in the under and the upper sleeve be in proper proportions.

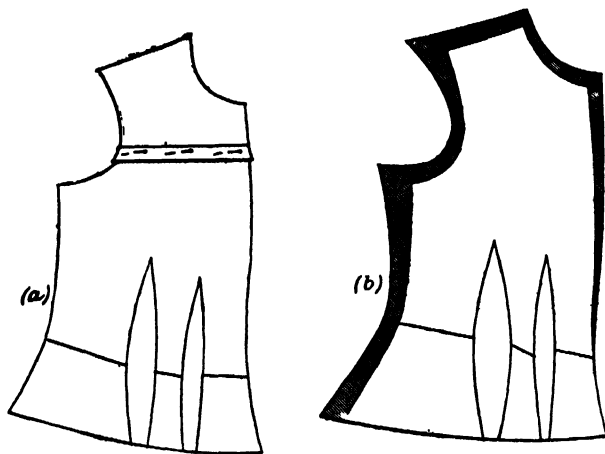


Fig. 394.—Altering Front (a) Shortening, (b) Lengthening or Widening.

In making any of the above alterations in bodice or sleeve patterns, it is advisable to lay each portion on a sheet of cutting-out paper, and to re-cut it in the desired form.

Fig. 396 shows the same plan of shortening or lengthening a skirt pattern. Never shorten from the foot of the skirt, as this would decrease the fulness and interfere with the shape.

In a well-cut pattern the following points should be noted:—

1. *The position of the shoulders.* When the figure is looked at from the

front, the seam should lie along the extreme edge of the shoulder, and not fall either to the front or to the back. The actual length of the shoulder varies according to the fashion, and is usually partially dependent upon the sleeve;

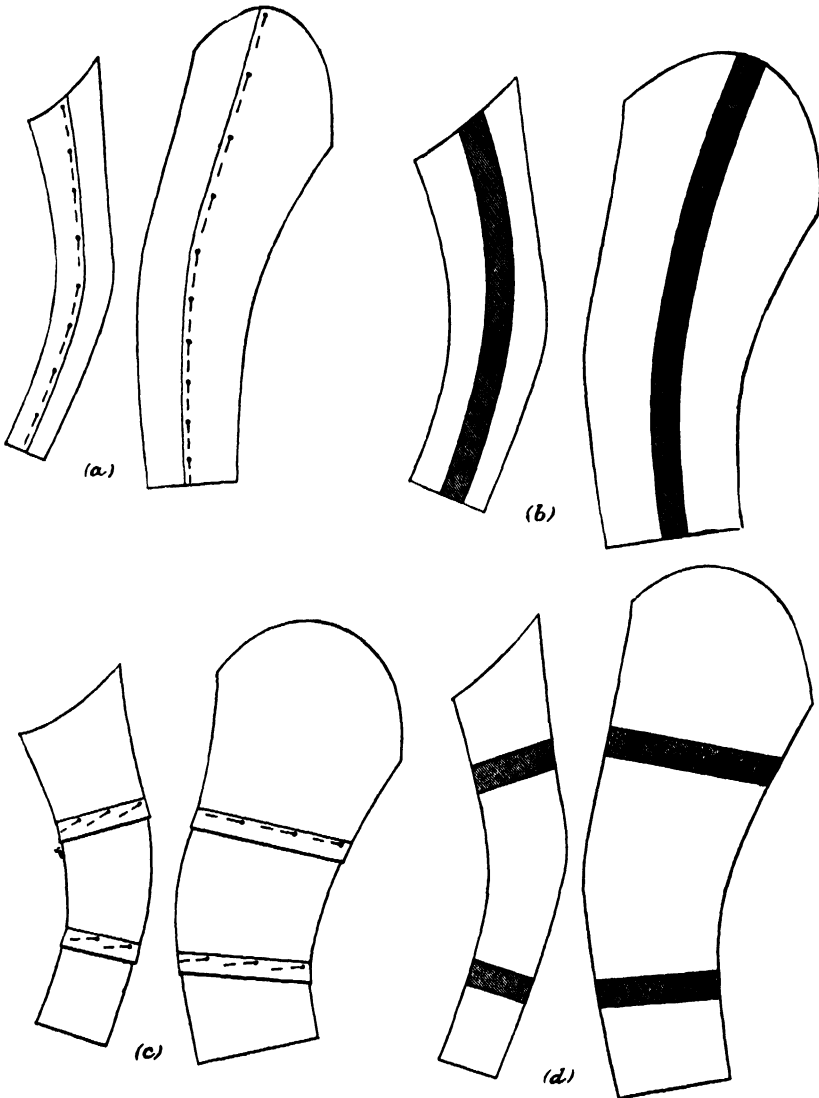


Fig. 395.—Altering Sleeves

(a) Decreasing width, (b) Widening, (c) Shortening, (d) Lengthening.

when the sleeves are worn narrow and small the shoulders are long, and when the sleeves are very full and large, fashion usually decrees short shoulders.

2. *The height of the darts.* They should just fail to reach the fullest

part of the bust. A good guide for average figures is to measure the length from the neck to the waist in the middle front; the top of the darts should be on a level with the centre of this measurement.

3. *The under-arm seam.* This should reach to from 2 to $2\frac{1}{2}$ inches under the fall of the arms. To find the fall, let the arm hang down in its natural position, and measure from the point where it begins to separate from the body in front.

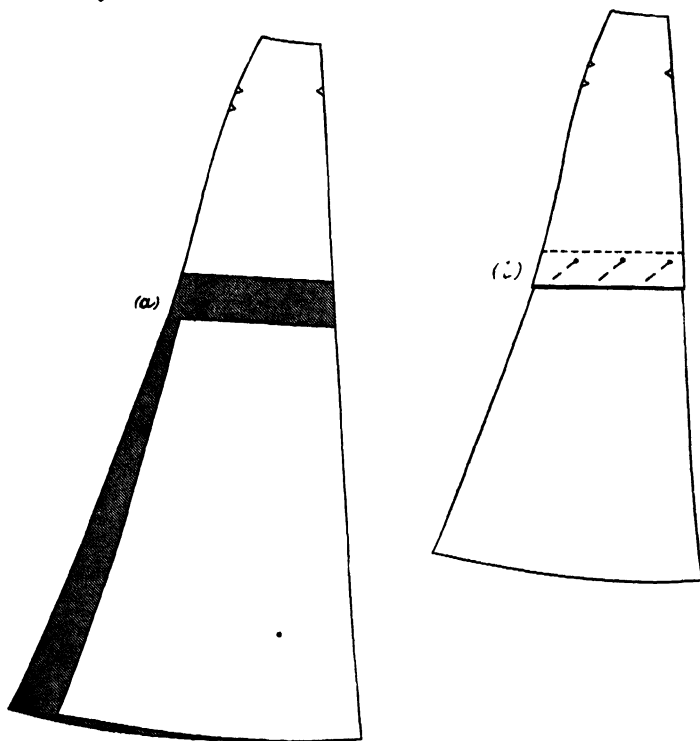


Fig. 396.—Lengthening and Shortening a Skirt Pattern.

4. *The front waist.* Usually, the waist of the front piece measures, when finished, about one quarter of the whole waist measurement. In stout figures it is frequently $\frac{1}{2}$ to 1 inch less than the quarter waist.

5. *The width of the back between the shoulders.* Here the dress must be quite tight-fitting, but the amount hollowed out at the arm-hole also varies according to the fashion of the sleeves and the length of the shoulders. Small close-fitting sleeves require a wider back than large full ones. Width across the back gives the appearance of a smaller waist. The length of the arm-hole in this place is usually 2 to $2\frac{1}{2}$ inches down from the shoulder,

6. *The division of the back bust.* This is the portion of the back just below the arms, and it is usually divided into three parts (for very stout figures, into four) for the back and side pieces. The actual divisions of this

part vary very much with different systems. A tailor-cut bodice usually has the amount divided equally, one-third or a quarter of the amount in each piece. In French-cut bodices the middle back piece is made wider, which brings the curved seam much straighter; roughly, the middle back bust in this style of bodice is nearly double the side back and under-arm pieces, giving a very flat appearance to the back. The effect of the tailor method is to decrease the appearance of the waist, and increase the width of the back.

7. *Back waist.* The entire width of the three back pieces, that is, from the centre back to the under-arm seam, is generally one quarter of the whole waist measurement. The middle back piece itself measures from 1 to $1\frac{1}{2}$ inch. The waist of the two side pieces may be equal, or the under-arm portion may be $\frac{1}{4}$ to $\frac{1}{2}$ inch larger than the side back piece.

8. *Waist lines.* In fitting and adapting any pattern, the exact position of the waist must be marked on each piece with chalk, pencil, pins, &c., before removing the pattern from the figure. Then, in cutting out and making-up the bodice, these waist lines should be tacked and the tackings left in until the making is completed. They act as guides in putting together the pieces, arranging the fastenings, shaping the basque, &c. If they are not accurately marked, much unnecessary trouble will be caused, and probably the bodice will be crooked or a bad fit when finished.

These principles will enable those by whom they are mastered and carefully carried out to produce correctly-cut and well-fitting garments.



Fig. 307.—Tracing Wheel for use with Paper Patterns.

MEASUREMENTS.

In a rightly proportioned figure only two measurements, taken directly from the figure, are necessary for a complete bodice. These, known as the primary measurements, are:—(1) The width of the bust taken round the widest part of the figure, exclusive of the arms; (2) the length of the back, which is taken from the nape down to the hollow of the waist at the back; but as few figures are absolutely normal, also the waist measure should be added.

From the two primary measurements the secondary may be proportioned thus:—

(1) Measurements of width.—Neck = $\frac{1}{3}$ bust; waist = $\frac{2}{3}$ bust; back (between the arm-holes) = $\frac{1}{3}$ bust; chest (across from fall of arms) = $1\frac{1}{4}$ width of back.

(2) Measurements of length.—Front = $\frac{7}{8}$ length of back; under arm = $\frac{1}{2}$ length of back.

Balance or Test.—If a bodice is to be successfully cut it is absolutely necessary to discover the attitude or natural balance of the figure. This, with practice, may be successfully gauged with the eye, but inexperienced workers should use balance or test measures. The natural attitude may

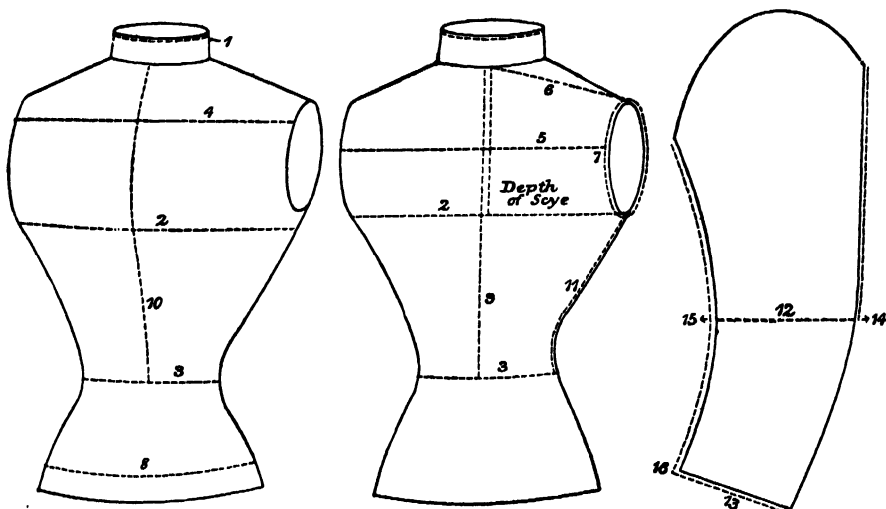


Fig. 398.—How to take Measures for Paper Pattern.

Width Measures.

1. Neck Round the upper part.
2. Bust All round fullest part, the tape brought 1" above scye depth.
3. Waist Measurement taken tightly.
4. Width of Chest Across chest 2" below throat.
5. Width of Back Across widest part of back.
6. Width of Shoulder From nape of neck to arm joint.
7. Width of Armhole Round armhole.
8. Width of Hips 5" below waist.

Length Measures.

9. Back Length... From nape of neck to waist
10. Front Length From throat to waist.
11. Underarm From armpit to waist.

Sleeve Measures.

12. Elbow Width Round elbow. [thumb inwards.
13. Wrist Width... Round the thickest part of hand,
14. Elbow Length From armhole to elbow.
15. Armhole From armhole to armbend.
16. Front Length Armhole to wrist.

incline forward, as in a stooping figure, or backward as in one over-erect, and the object of the balance measurements is to test whether the figure is strictly erect or whether it has any inclination either way. The nape or junction at the back neck is the starting-point; the length of the back is used as the primary test measurement, and usually two secondary ones are added:—(1) the nape to the waist in front; (2) the nape to the hip in front. In a rightly-proportioned upright figure the relative length of these secondary measurements may be calculated thus:—

Nape to waist in front = $1\frac{1}{2}$ length of back; nape to hip in front = 1 inch less than nape to waist.

In stooping figures the front balance will be shorter, and in over-erect, longer. In order to test the attitude correctly, it is wise to place a narrow leather strap round the figure, letting it rest at the waist on the hips, and keeping it in the same straight level all the way round. The measurements

PLATE A.—KIMONO COAT, Three-quarter Length

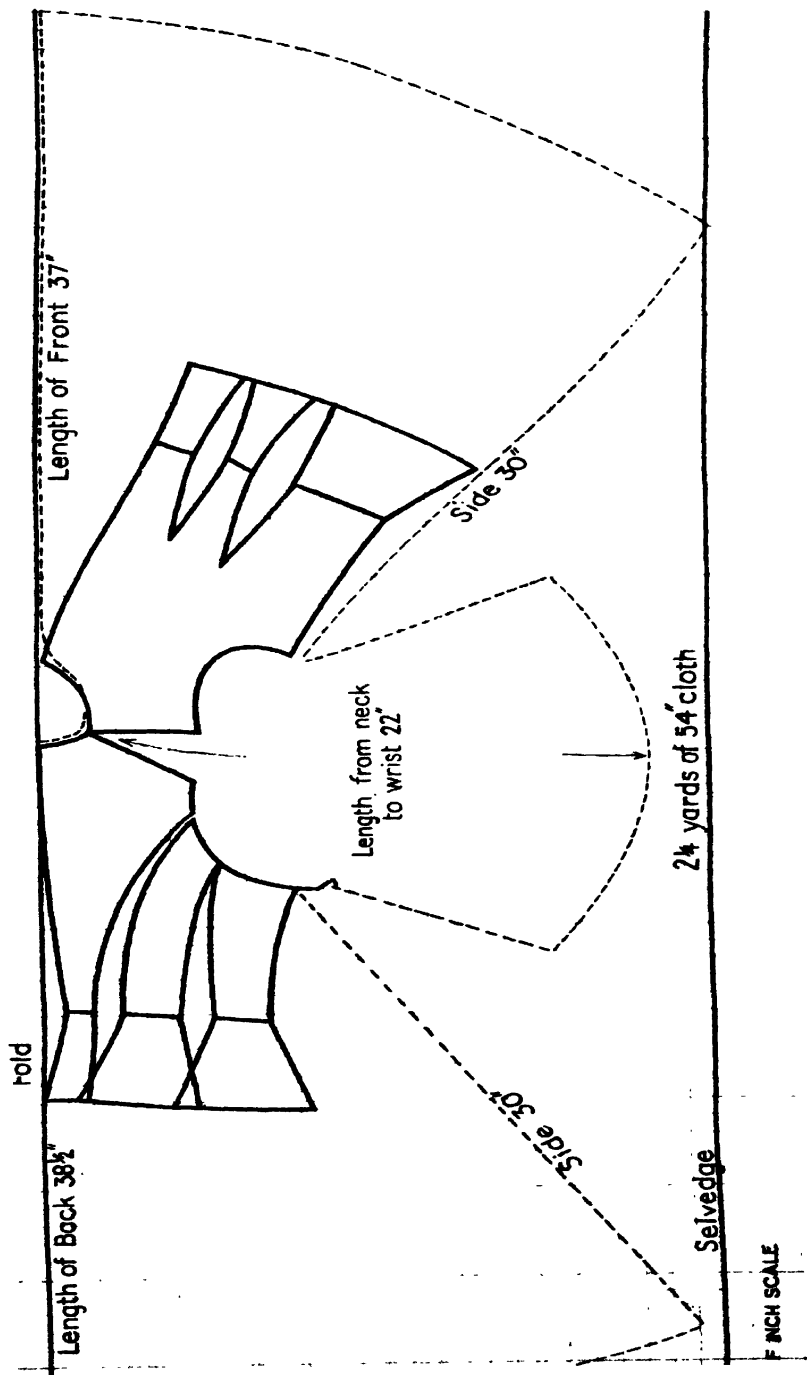
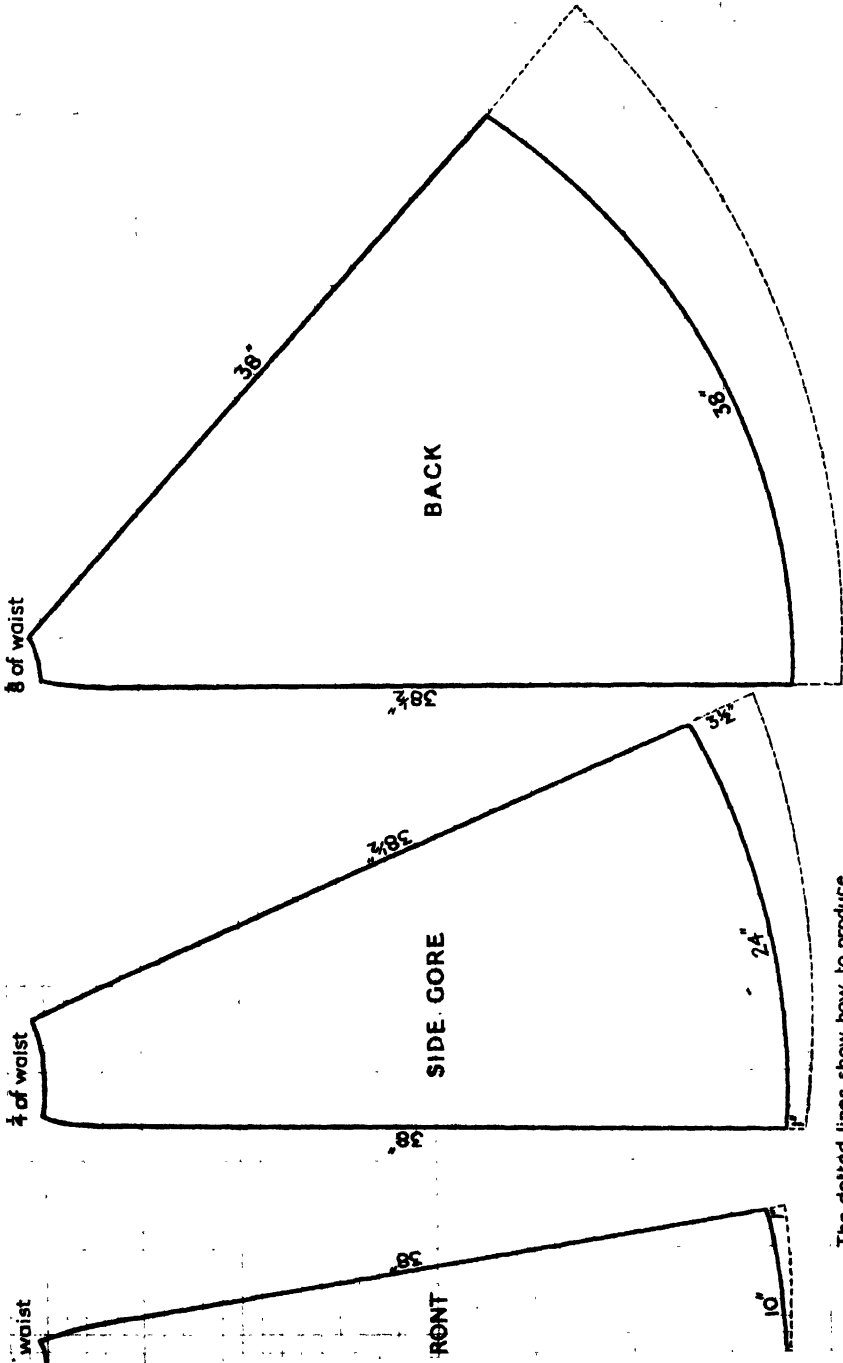


PLATE B.—FIVE-GORE SKIRT



The dotted lines show how to produce a Trained Skirt

SCALE 1/8"

PLATE C.—FIVE-GORE SKIRT PATTERN
PLACED ON MATERIAL

Selvedge

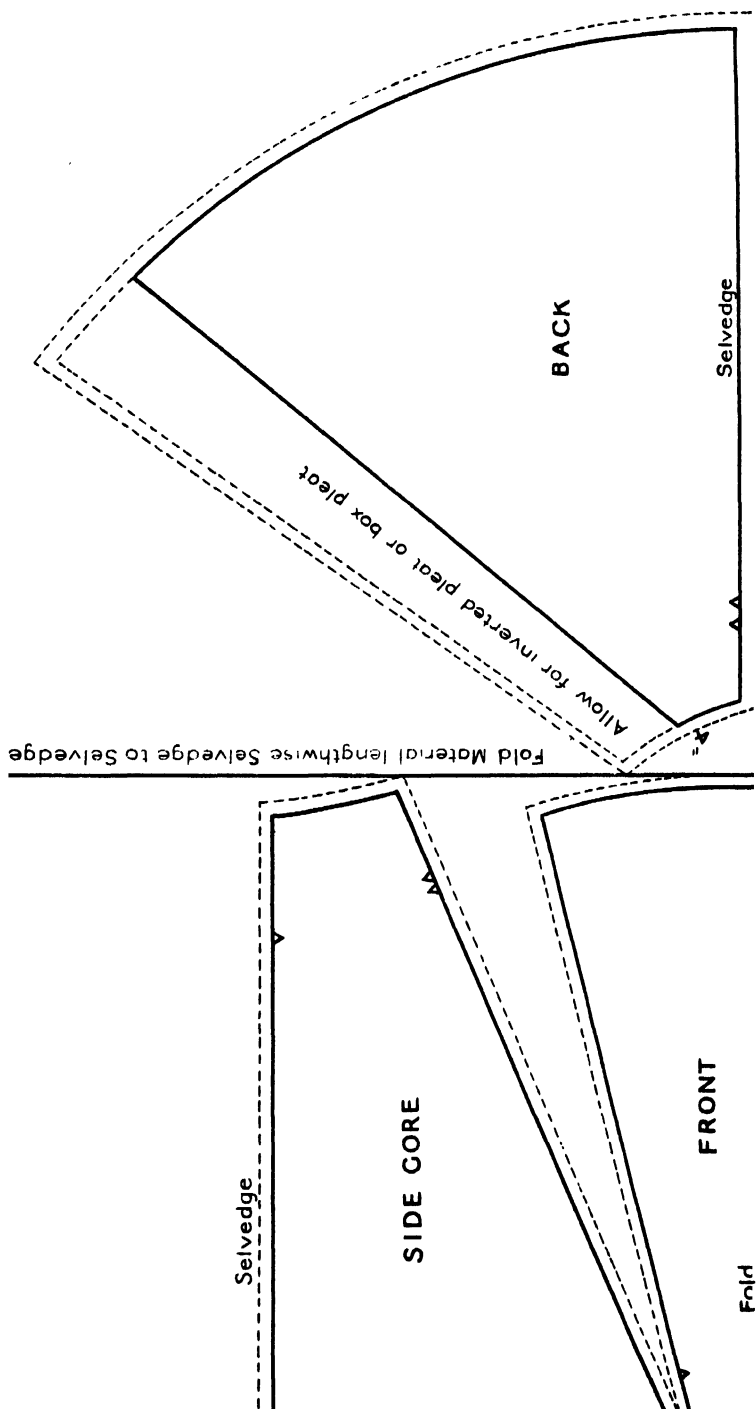


PLATE D.—SEVEN-GORE SKIRT

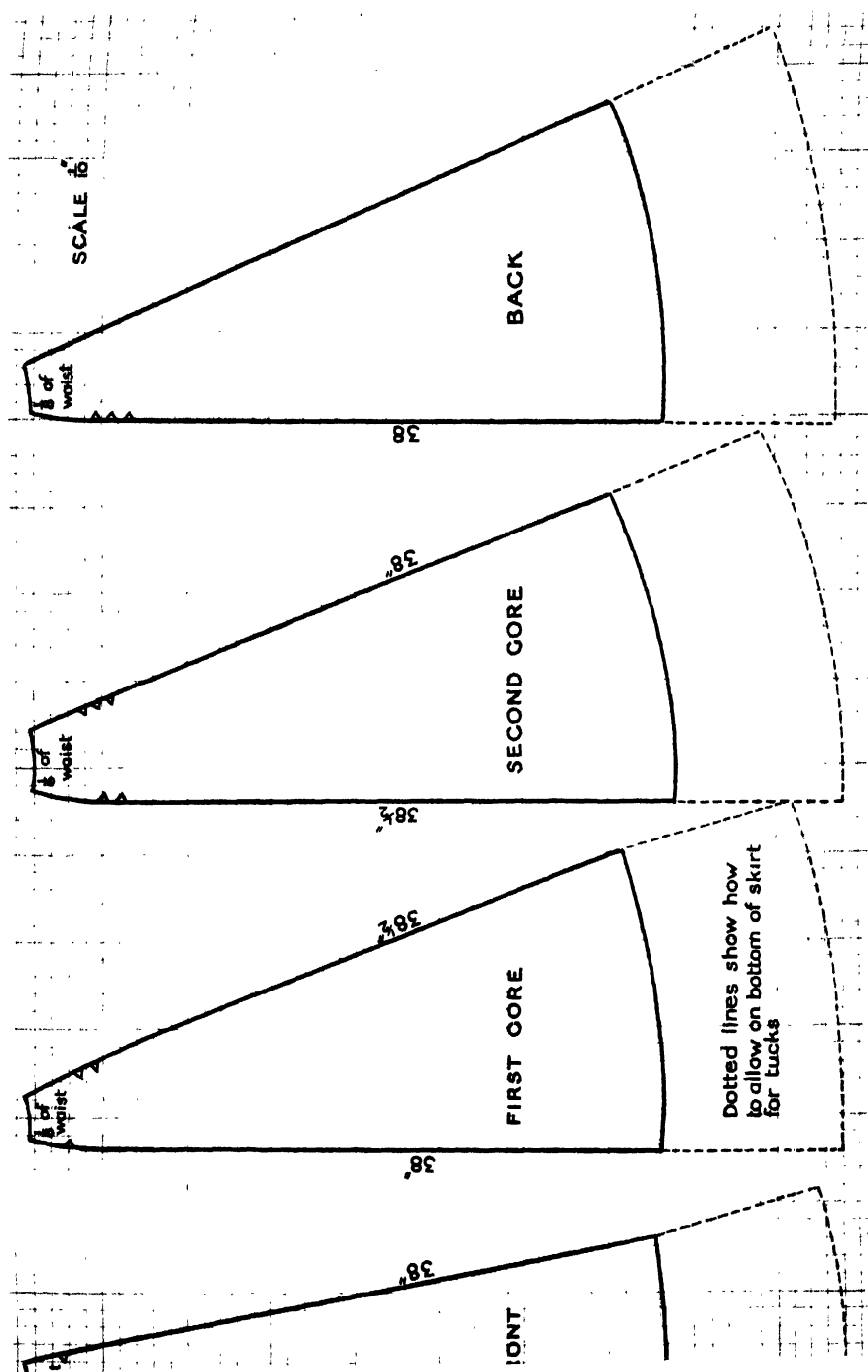


PLATE E.—SEVEN-GORE SKIRT PATTERN
PLACED ON MATERIAL

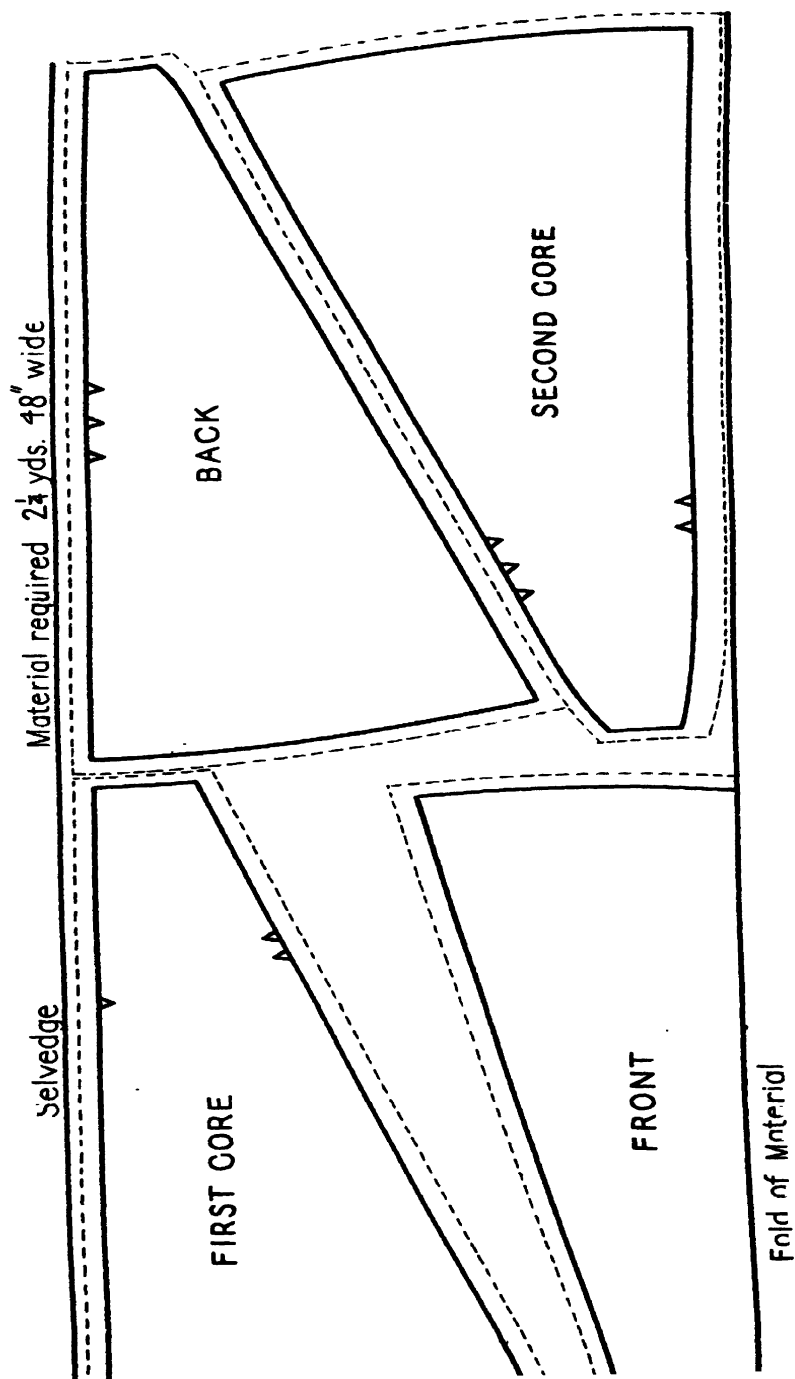
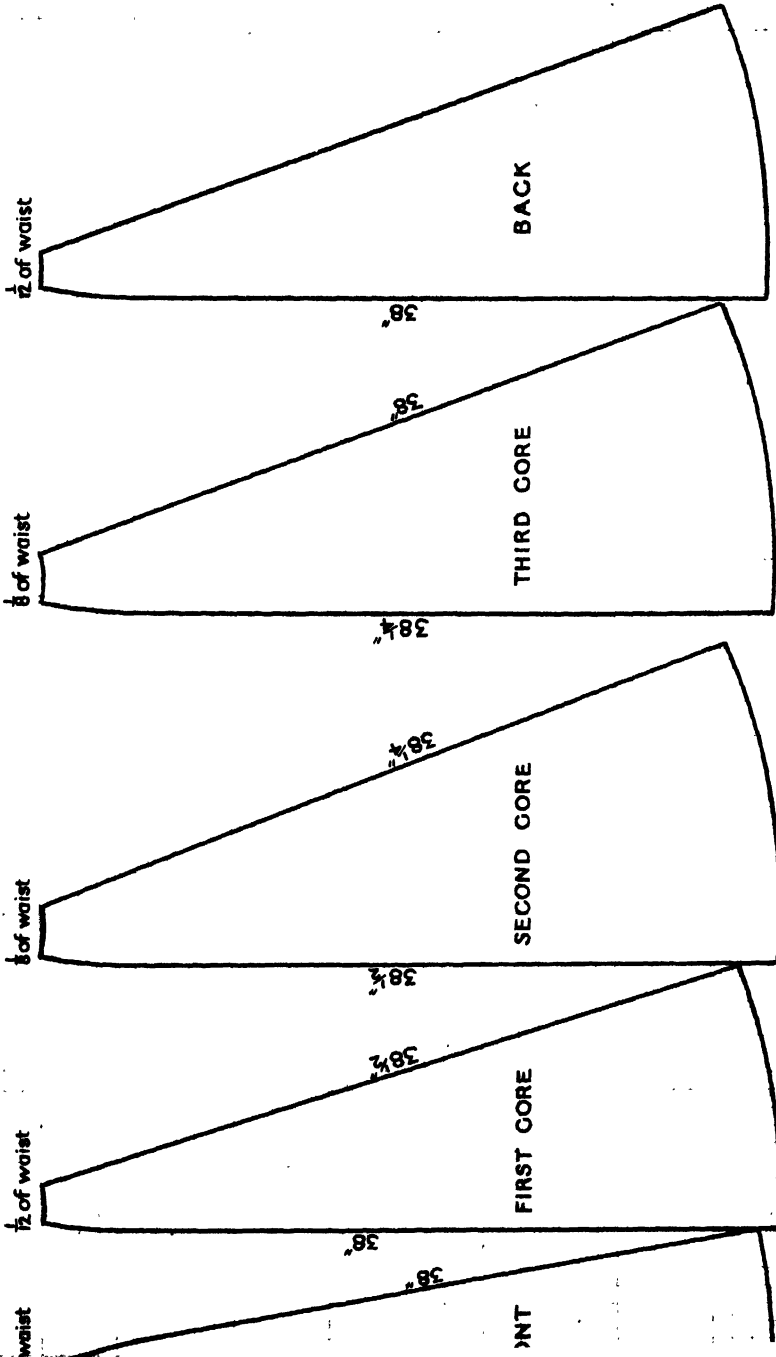


PLATE F.—NINE-GORE SKIRT



SCALE 1/2"

PLATE G.—GOLF CAFE
WITH SLANTING BACK SEAM

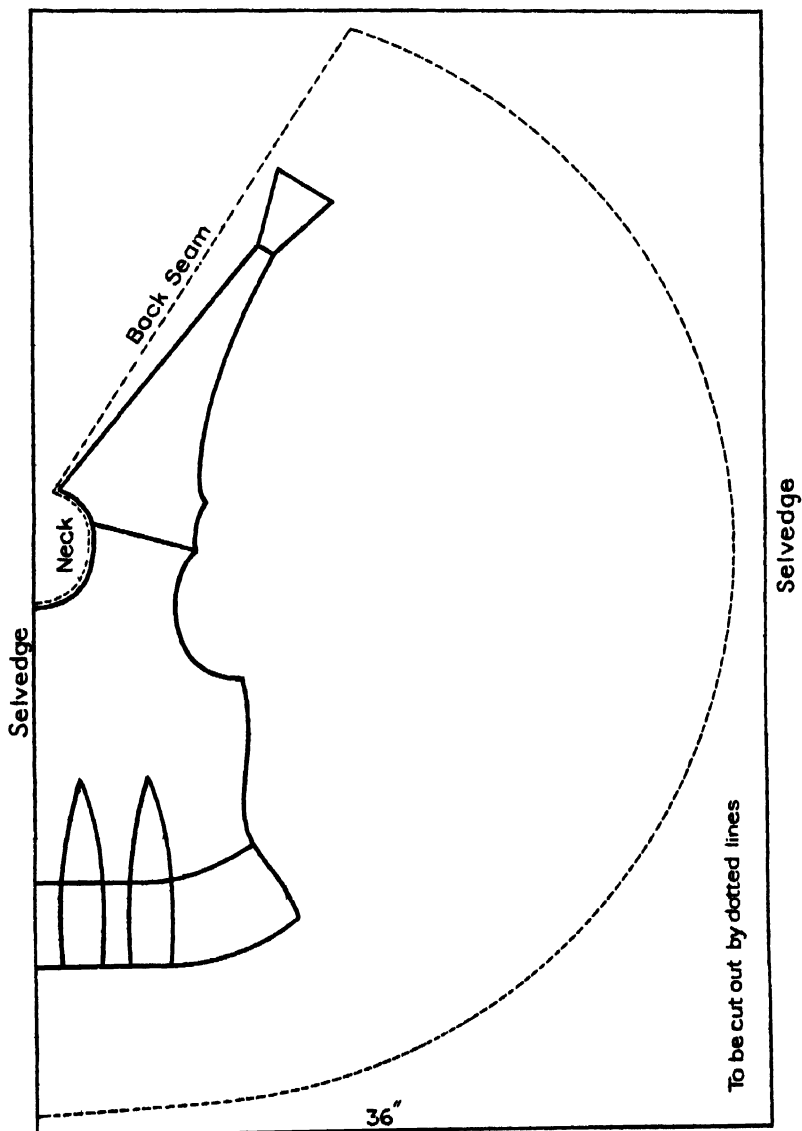
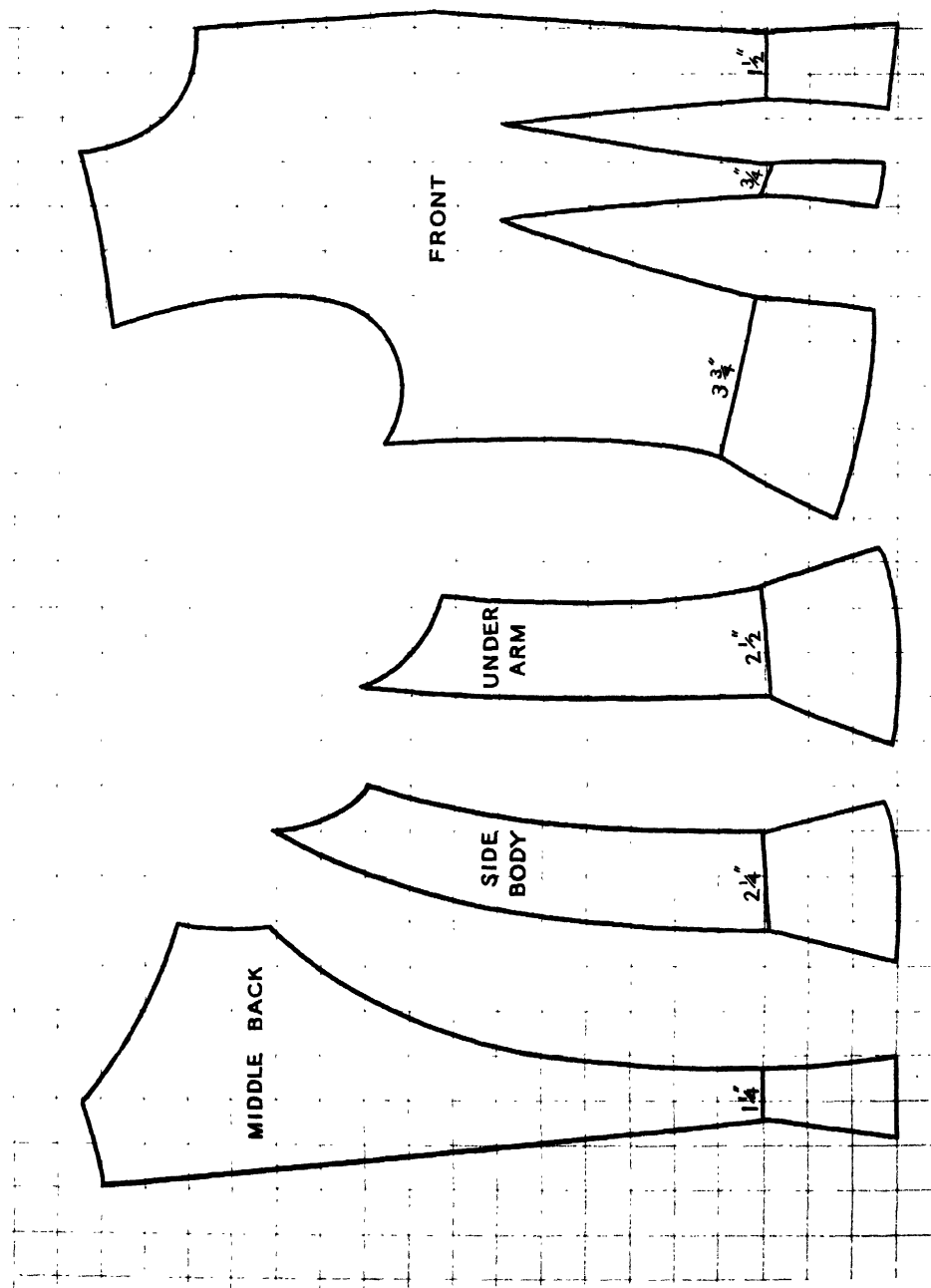


PLATE H.—MODEL BODICE



must all be taken only to this strap; otherwise, if the figure is longer-waisted in the front or back, the balance will be incorrectly taken. Balance measures may also be thrown out of proportion in cases of undue stoutness or slightness, points which should therefore be noticed before deciding upon the attitude to be fitted.

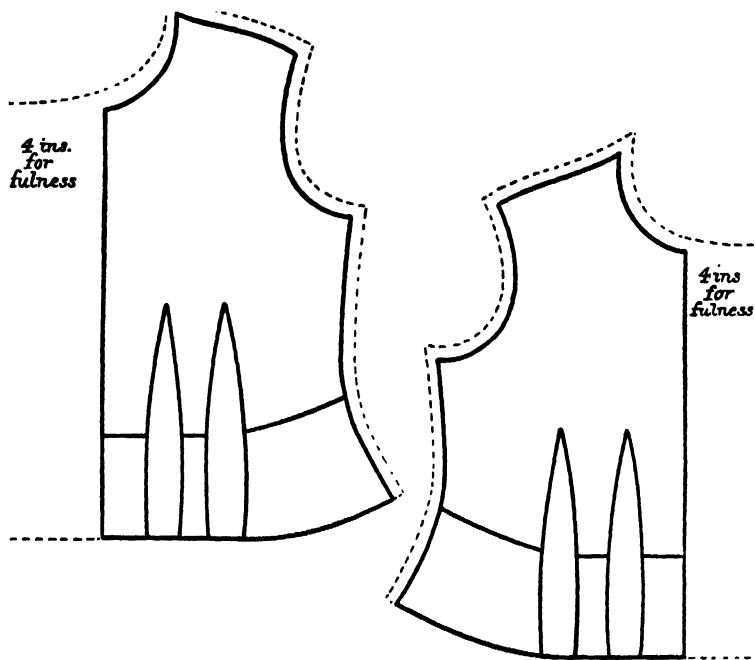
If the figure stoops forward very much, the shoulder-blades will, in all probability, project at the back. This must be provided for by giving a deeper curve to the side back piece, and easing it in when joining it to the middle back piece. Also in a stooping figure the chest will most likely be contracted, and this in its turn generally necessitates taking in the front $\frac{1}{4}$ to $\frac{1}{2}$ inch at the neck. On the other hand, an over-erect figure will need less curve at the side back and greater slope down the centre back seam from the nape in to the waist.

Fig. 398 shows how measurements may be taken from the actual figure. These may be used in testing the accuracy of alterations in paper patterns, or they may be sent to some recognized school of dresscutting, where a well-fitting bodice in linen may be obtained at prices ranging from 3s. 6d. to 10s. 6d. Forms of self-measurement are also given in many of the ladies' papers of to-day.

When a well-fitting flat pattern has once been obtained, many other garments may be cut from it. Take, for instance, the kimono coat, illustrated on Plate A. This wrap is very suitable for day or evening wear, as it is easily put on, does not crush the dress, and is flowing and graceful in design. It will also recommend itself to the home dressmaker by its simplicity of construction. The plate shows a three-quarter length, but if a long coat is required, an extra yard of material will be needed and gusset-shaped pieces must be placed at the bottom of the front and back seams, in order to increase the width. The kimono pattern is also useful as a dressing-gown, made in Japanese style. Use a figured material, and trim with bands from 2 to 3 inches in width in self-coloured material or silk of harmonious tone.

CUTTING OUT GARMENTS FROM FLAT BODICE PATTERNS.

Blouses.—Figs. 399 and 400 illustrate the method of cutting out shirt or unlined blouses from bodice patterns. Two and a half to three yards of print are sufficient for one blouse. The amount of fulness left in front varies with fashion; more than 6 inches is seldom allowed, 3 or 4 inches being the average, but this, of course, will not include a broad hem. If the paper pattern has large darts a little of the fulness may be sloped out at the under-arm seams. To cut out the back, fold the material down the centre and place the middle back piece about 2 inches to the inside of the fold. The side and under-arm pieces are placed next to this, but as these blouses usually have a yoke across the back, the back pattern must be turned in straight across at the top, according to the depth of the yoke



32 ins. wide

Fig. 399.—Blouse—Fronts.

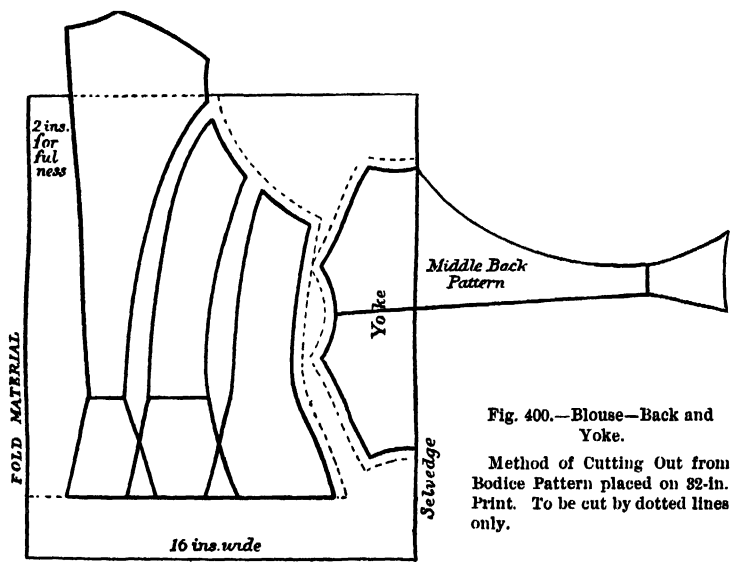


Fig. 400.—Blouse—Back and Yoke.

Method of Cutting Out from Bodice Pattern placed on 32-in. Print. To be cut by dotted lines only.

desired, usually on a level with the bottom of the middle back arm-hole. The three pieces of pattern for the back should be placed close together,

and the basques allowed to overlap; then extra material must be given at the hips to prevent the basque from being too tight and dragging. The

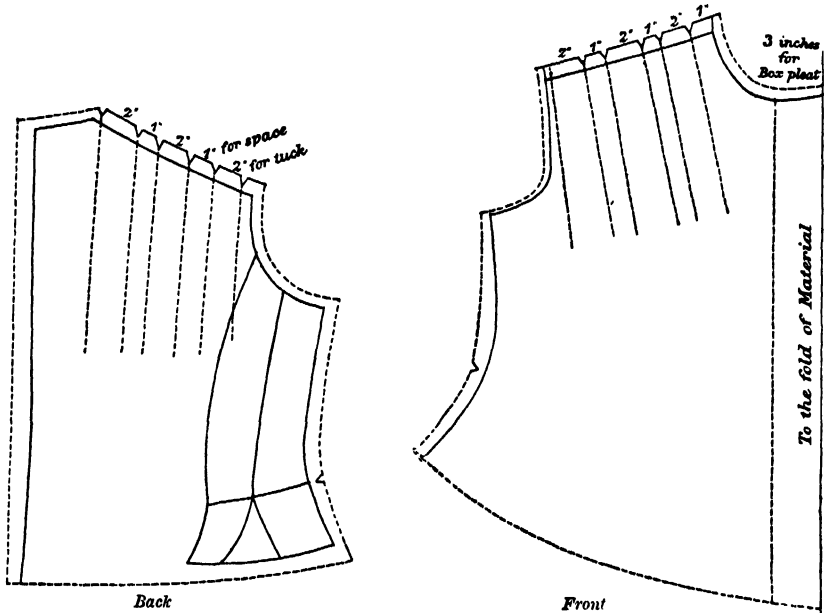


Fig. 401.—How to cut a Blouse with Tucks on Shoulder and Box Pleat in Front.

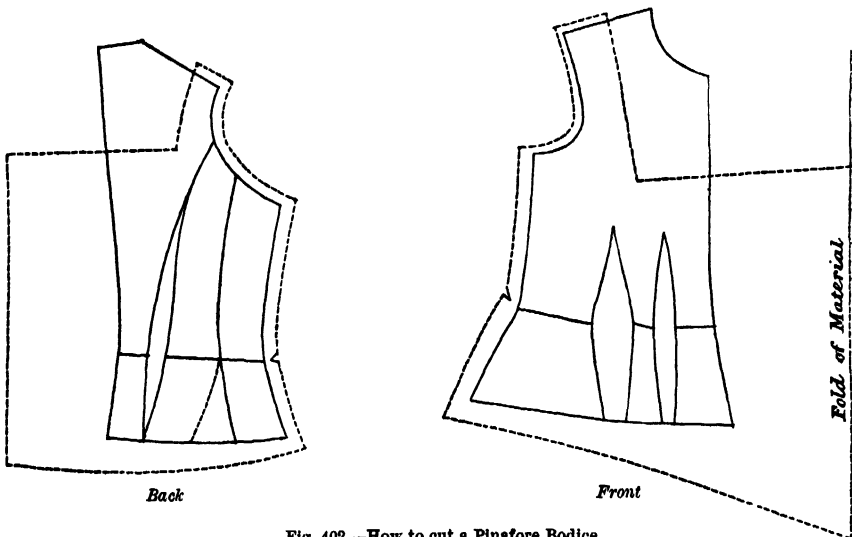


Fig. 402.—How to cut a Pinafore Bodice.

yoke is cut by the portion of the back pattern previously folded down, but it is wiser to make it a little wider across the back. The material for the yoke should be cut with the selvedge running across from arm to arm, as

this is the strongest way of the fabric, and most strain is brought to bear upon this part of the garment during wear.

Fig. 401 shows the method of cutting a blouse with box pleat, and tucks in front. The shoulder is extended according to the amount required for

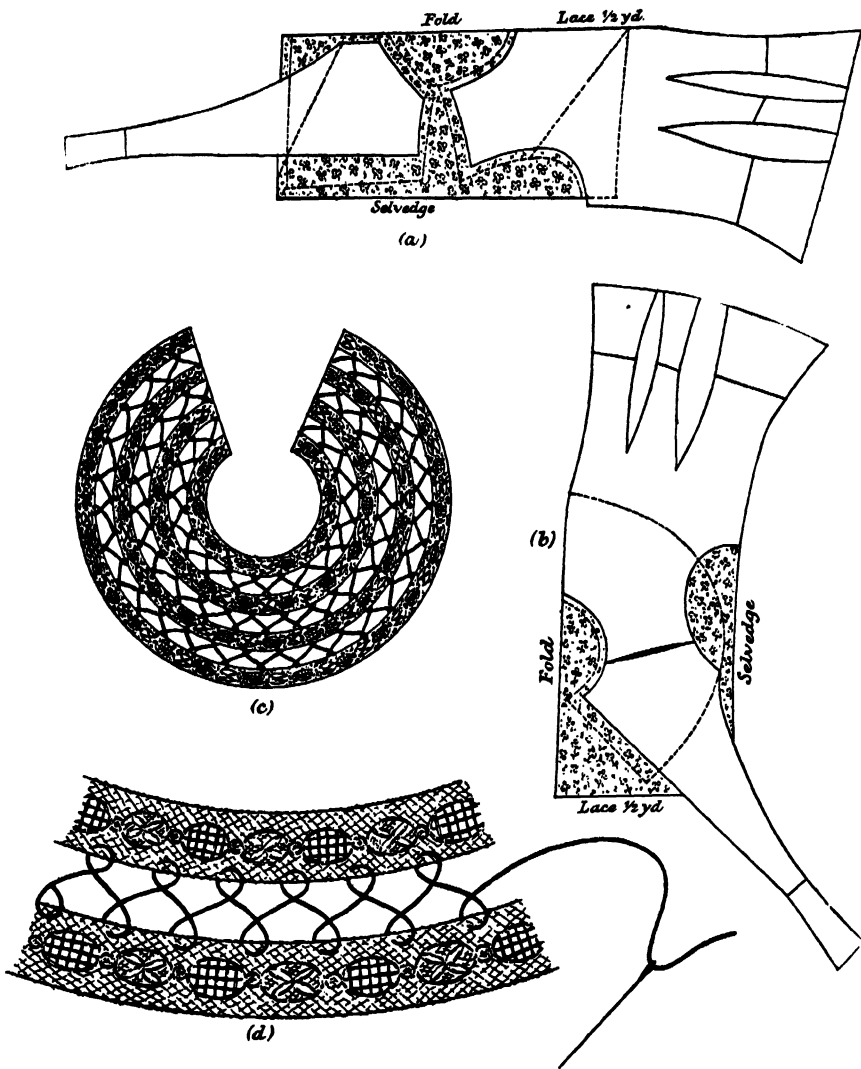


Fig. 403.—Method of cutting various Yokes.

tucks. In this diagram six tucks 2 inches in width are allowed. The position and size of tuck is marked by a notch, and a space of 1 inch is left between each two tucks.

Fig. 402 shows how to cut the pinafore bodice or sleeveless blouse. This becoming and useful pattern is very generally worn. It requires a

separate yoke and sleeves made on an independent foundation. The latter is easily removed for washing, and admits of frequent change. This adds variety to the dress.

Yokes for the front of a bodice or blouse are cut out by the top of the front pattern, making them exactly the same shape round the neck,

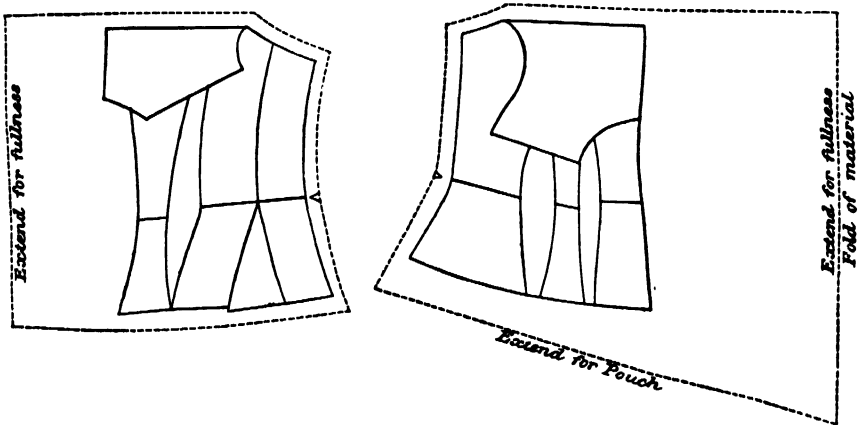


Fig. 404.—How to Cut Out the Full Front and Back for a Fancy Yoke Blouse.

shoulders, arm-hole, and front, and cutting them across the required depth either straight or on the slant.

Fig. 403 illustrates the method of cutting various yokes, square, pointed, or round. (c) shows a round yoke made with insertion. First cut out the

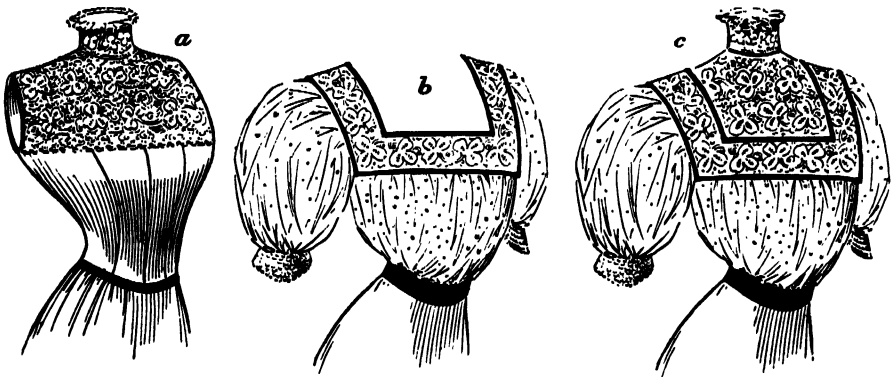


Fig. 405.—The Adaptation of a Blouse for Day or Evening Wear.

pattern in stiff paper, and tack on the insertion in rows, leaving a space of about half an inch between each two rows. Join the insertion by fagot stitch, as shown in (d).

Fig. 404 shows how to cut out the full front and back for a fancy yoke blouse.

Fig. 405 shows the adaptation of a blouse for day and evening wear.

Capes.—Capes vary so much each season that no very definite rules can be given for cutting. Full short capes, commonly called coachmen's capes, are cut with the back and front bodice patterns placed on the same straight line (fig. 406), which, if the cloth is sufficiently wide, should be to the fold.

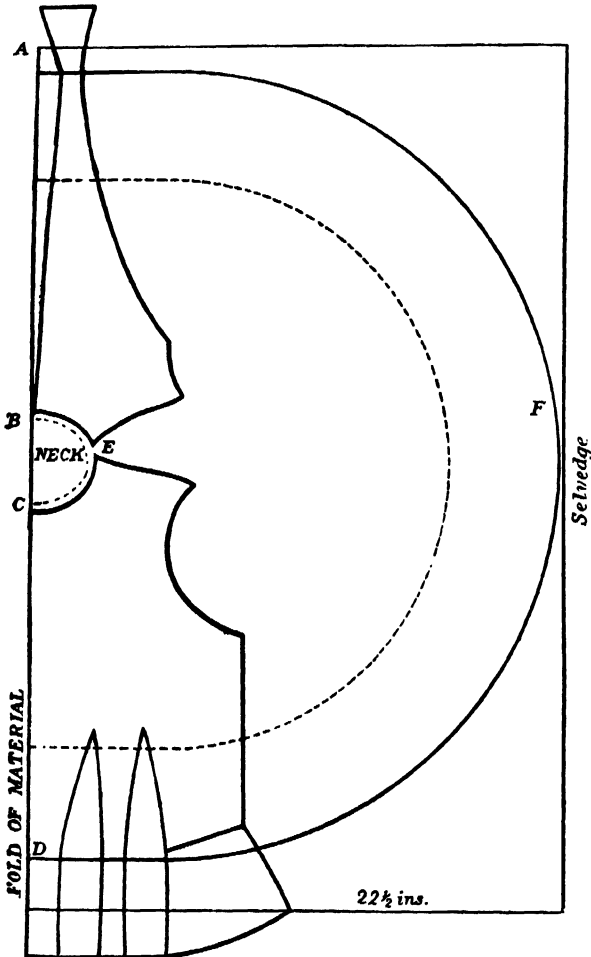


Fig. 406.—Full Circular Cape cut out from Bodice Pattern.
May be cut long or short as desired.

From the end of the material (A), measure down the fold the required length of the back to B; from this point chalk round the size of the neck (C), which may be found by placing the back and front pattern together so that the tops of the shoulders at the neck meet, and the centre back and front seams lie along

sure the length of the front down from the neck (C), which will give D. The length required over the shoulders varies very much with the style of sleeves worn, but in any case it must be measured from the neck where the shoulders meet (E) straight across the material (F). Then sweep a curve from A round F to D. The fold at the front waist must be cut up to the

neck, and the neck hollowed out by the chalked line.

A long cape, such as a golf cape (Plate G), may be cut by putting the back and front pieces of the pattern flat on the material with the shoulders joining all the way, cutting the back down by the centre of the back pattern, and the front by the centre of the front pattern, and hollowing out the neck. Both the front and back are sometimes cut on the cross of the material, but it is more usual to keep the centre quite straight, with the selvedge and the back only on the cross. This kind of

cape cannot be cut on doubled material, but must have a seam down the centre of the back. The length of the cape varies, and must be measured down the back, front, and shoulder, the bottom being curved round from point to point as in the shorter cape.

CUTTING OUT PLAIN AND FANCY SLEEVES.

Plain Sleeves.—After fitting on the paper pattern, open the seams and cut away the turnings; then lay the under or smaller piece on the upper or larger part. The inner seams of both should match or fit each other when the two parts are lying quite flat one on the other; at the outer seam or edge the under-arm piece should be at least 2 inches smaller along the wrist, elbow, and arm-hole than the upper part, in order to bring the outer seam 1 inch under the back of the arm when finished. Coat sleeves, on the contrary, are frequently cut with the two pieces the same size from the wrist up to the elbow. For tight-fitting sleeves the seams are curved in a little from the arm-hole to the elbow, and very slightly out from the elbow to the wrist. The wrist seam should proceed at right angles to the inner seam below the elbow. The amount of bend or slope-in for the inner seam at the bend of the arm is usually from 2 to 2½ inches. When the pattern is placed on the lining the warp threads, those which run the way of the selvedge, must fall straight down the centre of the sleeve above the elbow. If there is any difficulty about this, a good plan is to draw a line when the pattern is being fitted; hold the arm straight out on a level with the shoulder, and draw the line from 1 inch to the front of the shoulder seam to about half-way down the sleeve in a direct line with the middle finger. This line must be

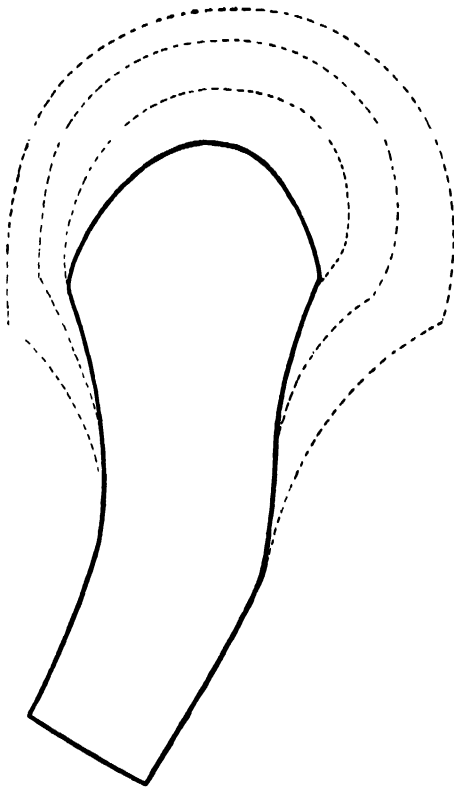


Fig. 407.—Sleeve. Three methods of enlarging at the top, shown by dotted lines.

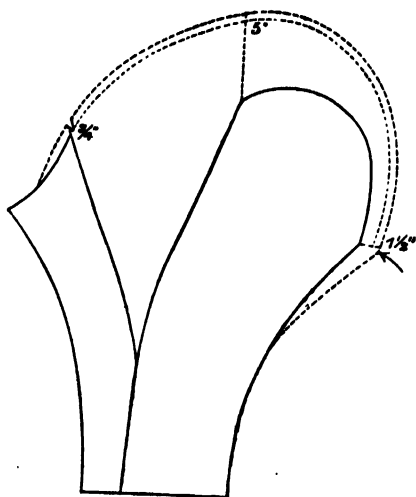


Fig. 408.—Full Sleeve.

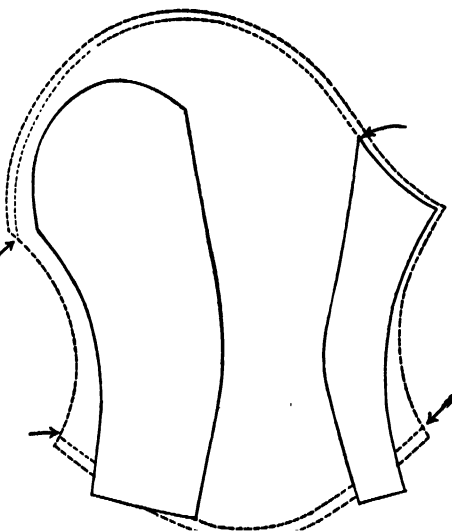


Fig. 409.—Method of cutting Bishop or Puffed Sleeves.

placed down the warp threads in cutting. The under sleeve should have the arm-hole and wrist-points of the inner seam in a straight line, *i.e.* on the same warp thread.

Full Sleeves.—There are endless varieties of full sleeves, and the actual cutting out of the pattern must be left a good deal to the discretion of the dressmaker. Generally a tight-fitting lining is sufficient, with the material enlarged and full, or draped, over it. Sometimes the sleeves are gradually enlarged from the elbow

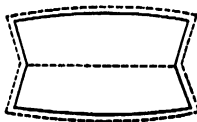
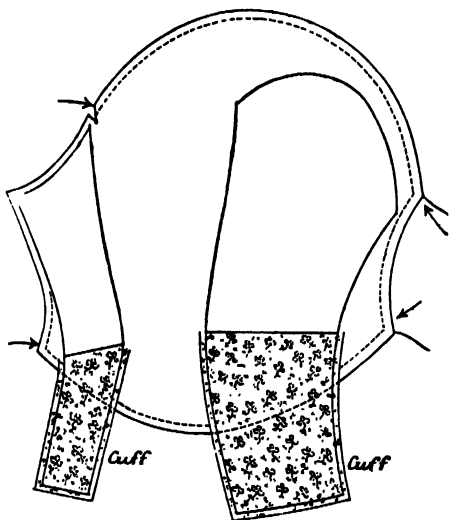


Fig. 410.—Puffed Sleeve with Lace Cuff.

to several inches beyond and above the arm-hole; sometimes also they are enlarged equally at both seams, but usually rather less is given to the inner seam. Other patterns have only the top enlarged by increasing the size at the end of the seams gradually out over the arm-hole. Whatever plan is adopted, care must be taken to cut the seams the same length

as the lining from the elbow to the arm-hole, so that in making they fit together (see figs. 407-408).

Bishop or Puffed Sleeves.—The principle of cutting bishop or puffed sleeves is shown in figs. 409-410. They vary slightly in fashion, sometimes being wide all the way down, sometimes very full at the wrist, sometimes very tight at the wrist and full at the top. To cut them, lay the arm-hole and wrist-points of the outer seams of both pieces of the plain sleeve pattern in a straight line, and regulate the amount of space left between them by the width of the sleeve required. The top of the under part is cut exactly by the plain-sleeve pattern, and then the curve continued up thence over the upper piece of the pattern. If this has been cut for a very close tight-fitting sleeve, the curve for the bishop sleeve must be carried 3 or 4 inches higher in order to give sufficient fulness over the arm joints. If these sleeves are not cut high enough, they will drag from the shoulder down to the elbow, which will give a flat, pulled appearance.

COLLARS.

Stiff Collars.—Upright stiff collars are curved at both the bottom and the top, in order to make them fit closely to the neck. The amount of curve depends partly upon the size of the neck, and also upon whether

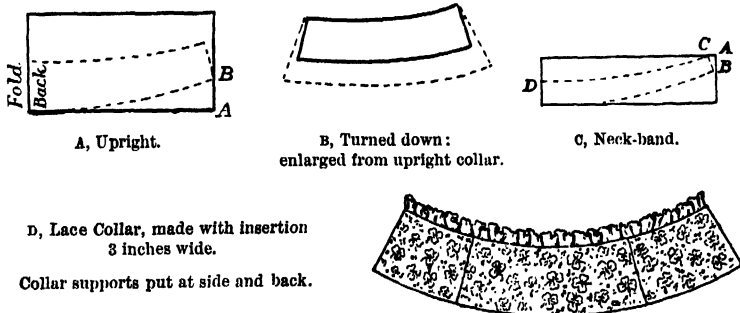


Fig. 411.—Collars. To be cut along dotted lines.

the collar is to fit closely or to allow sufficient room for a linen collar underneath. An old linen collar may sometimes be very successfully used as a pattern, provided it is cut with a curve and fits the neck well. Many home dressmakers prefer to use the circular-shaped stiffening which may now be bought at most large drapers' shops, $\frac{3}{4}$ yard being sufficient for two average collars. If used, it should be fitted on the dress before being covered, to get the right slope in the front; this should form a right angle with the end of the bottom curve, but it varies a little with different figures.

A simple way of cutting out a paper pattern for an upright collar is shown in fig. 411 (A). Cut a piece of paper 3 or 4 inches deep and about 15

or 16 inches wide, fold it in half, and make the fold the centre of the back. At the front ends (A) measure up 1 inch for a moderately-curved collar, $\frac{3}{4}$ inch for a slighter, and $1\frac{1}{4}$ inch for a greater curve; from this point (B) draw a curved line down towards the back to within 1 or 2 inches of the fold. Decide what depth the collar is to be— $2\frac{1}{2}$ –3 inches is now fashionable,—measure this distance at intervals up from the bottom curve, and join the points together with a curve. Then fit the pattern on to the person, taking care to keep the fold to the centre back seam, and cut off the ends in front to fit the neck. Some necks require the front of the collar to be a little narrower than the back; if this is necessary, hollow the top curve $\frac{1}{8}$ to $\frac{1}{4}$ inch to the front. Short thick necks usually need short and rather straight collars; while for long and thin necks they should be deeper and more curved.

Turned-down Collars.—Turned-down collars to fall over a stiff upright one may be cut by the same pattern, but they must be made a little deeper, from $\frac{1}{8}$ to $\frac{1}{4}$ inch below the bottom curve (see fig. 411, B), and a little more sloped at the ends from the top to the bottom. To make a low turned-down collar, suitable for loose blouses or dressing-jackets, take two straight pieces of material $2\frac{1}{2}$ to 3 inches deep and 15 or 16 inches long; machine these two together at the ends and along the bottom, and place the neck of the garment between the two pieces at the top; when worn, the back of the collars will fold naturally across into two, making an under part called a “stand”, and an upper part or “turn over”. The general appearance of this collar is narrow at the back, with the front deeper and somewhat pointed; when putting the collar on the dress, it should be eased in a little at the shoulder seams in order to prevent its dragging.

Neck-Bands.—A straight band about $\frac{1}{2}$ inch wide, when finished, is really sufficient for a shirt blouse, but it will fit more comfortably, and the linen collar will sit better, if it is a little curved. A curved neck-band is made like those on gentlemen’s white shirts; the pattern may be cut thus (fig. 411, C):—

Take a piece of paper 2 inches deep and 14 or 15 inches wide, fold the width in half, and keep the fold for the centre of the back. Measure from the top of the front (A) down $\frac{1}{4}$ inch (B), and from the same point along the top $\frac{1}{2}$ inch (C). From the centre of the fold (D) cut about 1 or $1\frac{1}{2}$ inch straight along, and continue in a curve up to C; curve the bottom up to B, keeping it straight from the fold the same distance as at the top. Finally, round off the point at A from B to C.

Coat Collars.—Coat collars consist of the collar itself and the lapel or revers. The latter is usually cut on the coat itself according to fashion, then lined and turned back. The neck curve is better if continued beyond the fitting line for about 1 inch, and then sloped up more or less as desired, to make the top of the lapel; the outside edge is curved down, or cut straight to meet the fitting line, usually as far down as the bust line, or about half-way between the neck and the waist. To cut the pattern of the actual collar (Fig. 412, a), which consists of two parts known as the “stand” and

"fall", take a piece of paper about 3 or 4 inches deep and from 7 to 8 inches wide; or for the width measure the actual size of the coat from the centre of the back to the end of the neck curve. Fold this across 1 or $1\frac{1}{2}$ inch from the bottom, thus dividing the stand from the fall or "turn over", and curve down from the front of the fold to the bottom of the centre back edge.

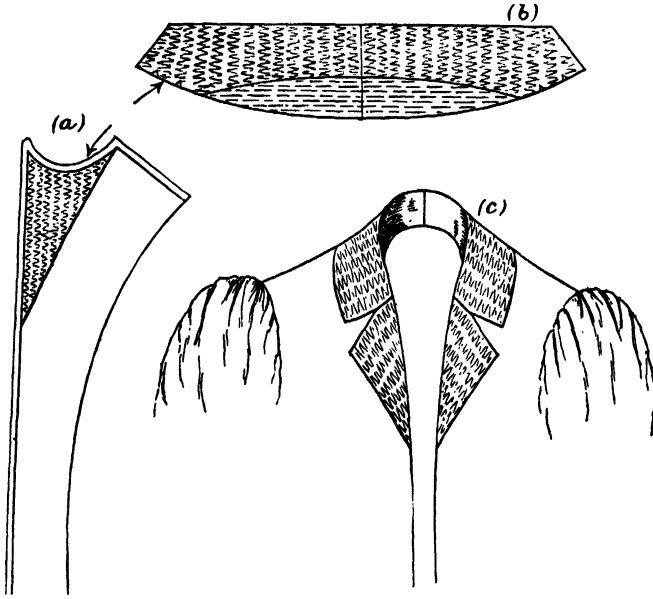


Fig. 412.—Coat Collar.

The centre back is also curved out about $\frac{1}{2}$ inch at the fold gradually off to the top and bottom and edges. In making up this collar only the upper pieces are cut with a centre back seam; the stiffening and lining or under-piece are cut with the centre back placed to a cross or diagonal fold of the material, and then the edges at the top and bottom are stretched by ironing until they are the same shape as the upper piece. This will allow the stand to be well pressed down on to the fall of the collar, both lying perfectly flat. Before pressing, machine the stiffening and lining together. Figs. 412, b and c illustrate position of collar and revers when fixed on coat.

SKIRTS.

The principles of skirt-cutting are very simple and are easily adapted to the individual figure. A well-cut walking skirt should hang evenly all the way round, and this end can only be attained by very careful measurement. The primary measures necessary are:—(1) Size of waist; (2) Width at hip (the hip measurement is taken round the trunk at

a depth of 5 to 6 inches below the waist); (3) Front length; (4) Side length; (5) Back length. The last three measurements are taken from the waist to the floor. The exact length of the dress is calculated on the decision of the wearer as to the distance she requires it from the floor.

In a normal figure the front length should be $\frac{1}{4}$ inch less than the back. In a stooping figure it will be shorter, and in an over-erect figure it will be longer. The side length will be slightly longer than the front, in accordance with the hip curve. Plate B illustrates a five-gored skirt, and Plate C shows the paper pattern placed on material in readiness for cutting out.

The seven-gored skirt illustrated by Plate D may be cut from less material, both in width and length, inasmuch as the number of gores being increased they are consequently less in width. This being the case the pattern is fitted to the material with less waste (see Plate E).

The nine-gored skirt seen on Plate F would be cut from material in a similar way to the above. Always cut the skirt of a dress first, so that pieces left over may be utilized in bodice-making. Before placing the pattern on the material, find out whether there are a right and a wrong side to the stuff, a right or wrong way up, or if it is printed with a floral design which needs matching. To avoid failures in this direction, it is better for the beginner to choose plain materials.

The average amount of lining required for a dress is as follows:—Bodice, $1\frac{1}{2}$ double width; skirt, $3\frac{1}{2}$ double width, or 5 yards of single width. The material required for a skirt is: 4 yards if 56 inches wide; $4\frac{1}{2}$ yards if 52 inches wide; 5 yards if 48 inches wide; 6 yards if 42 inches wide.

Skirt-making.—Before removing the paper pattern from the lining, run a tracing wheel down the side seams, showing place for stitching. Remove and place each piece of material on its corresponding piece of lining, laying the two wrong sides together. Pin it together on the material side, working slightly with the hand to make it lie flat. Tack it into position from the lining side. All skirt seams must be put together from the top; any inequality in length may then be corrected at the foot. When they have been stitched they should be trimmed and notched, all tacking thread removed, and the edges made neat by overcasting. Next, they should be pressed flat upon a rounded surface. A handy accessory for this purpose is found in a broomstick which has been previously covered in flannel. When this is inserted underneath the seam, the weight of the iron rests only on the required part, and is prevented from injuring any portion of the fabric.

The plackets come next in order. In the present fashion they are placed either at the left side of front width, as shown in fig. 413, or in the back width (see fig. 414). They should be 10 to 12 inches in length according to the width of wearer's hips and shoulders.

The flap should be made 1 inch longer than the opening, and about $2\frac{1}{2}$ inches wide when doubled. It is folded lengthwise in half on the wrong side and stitched across one end; next, turned to right side, and the centre crease pressed with a hot iron. Now stitch it singly to the lining and material on left side of skirt. Turn the skirt over to its wrong



Fig. 413.—Skirt with Placket at the Side.

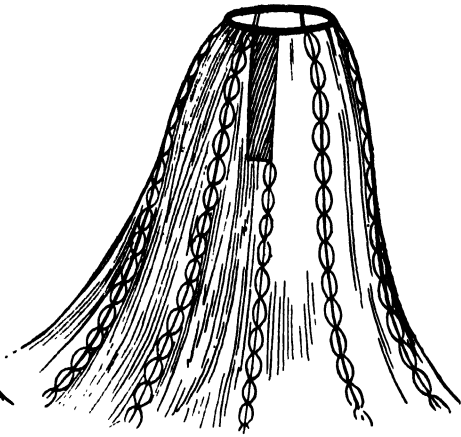


Fig. 414.—Skirt with Placket at the Back.

side, lay it flat on the table, and carefully bring the other edge of the flap over the lining of the skirt. Tack it into position and hem, great care being taken that no stitches show through. To treat the opposite side of the opening, turn it down narrowly over a piece of canvas about $\frac{3}{4}$ inch wide and herringbone it down to lining and canvas; then face neatly with silk to match the colour of the dress. Make the opening firm at the base by stitching the flap across, taking care that no stitches show through. Fasten with patent fasteners sold for the purpose. These must be secured to the opening by button-hole stitch. They are useful in many places as fastenings, and are preferable to hooks and eyes.

Pockets.—The bag pocket is the most convenient. This is inserted in the placket wrap, either at the side or the back of the skirt. Fig. 415, *a*, shows the method of cutting out the pocket in lining. Fig. 415, *b*, shows the pocket open with facing placed on slit. This piece should be about 4 inches wide, carried about half-way down. Tack it to the lining, and machine-stitch on. The material for the pocket should be folded in half and then stitched round. Next, turn it on the other side, and stitch again about $\frac{1}{4}$ inch from the edge. It is now ready for insertion in the placket wrap, where it may be stitched in and pressed.

Waistband.—The most useful form of banding is the double webbing slightly curved. When the skirt is ready to be put into this, its size at top should equal the waist size of the wearer plus 1 inch. This surplus inch is used in easing over the hips. The band length should equal the exact size of wearer's waist plus length of wrap and turnings. Each end must be turned in and oversewed, and the space allowed for the wrap marked off by a pin. If the skirt is opened from the back, find the centre of the waist-band measuring from the pin, and fix it to the centre of the front width of the skirt. The band should be marked at this point with a cross in coloured cotton to ensure that the skirt is worn correctly. The band must also be fixed in position at the centre back of the skirt, and

hemmed on, easing slightly over the hips. Great care must be taken to make the easings equal on both sides. If the front opening of the skirt is preferred, the centre of the front width must first be attached by a pin to the band, and the centre back must be measured from this point, omitting the extra length which has been allowed for wrap.

Note.—The waistband should always be put on *before* the bottom of the skirt is turned up.

Finishing at Foot.—To arrange this the skirt should be laid out flat upon a table, and front, back, and side lengths tested. A simple way of marking these is to use a piece of tailor's chalk in conjunction with

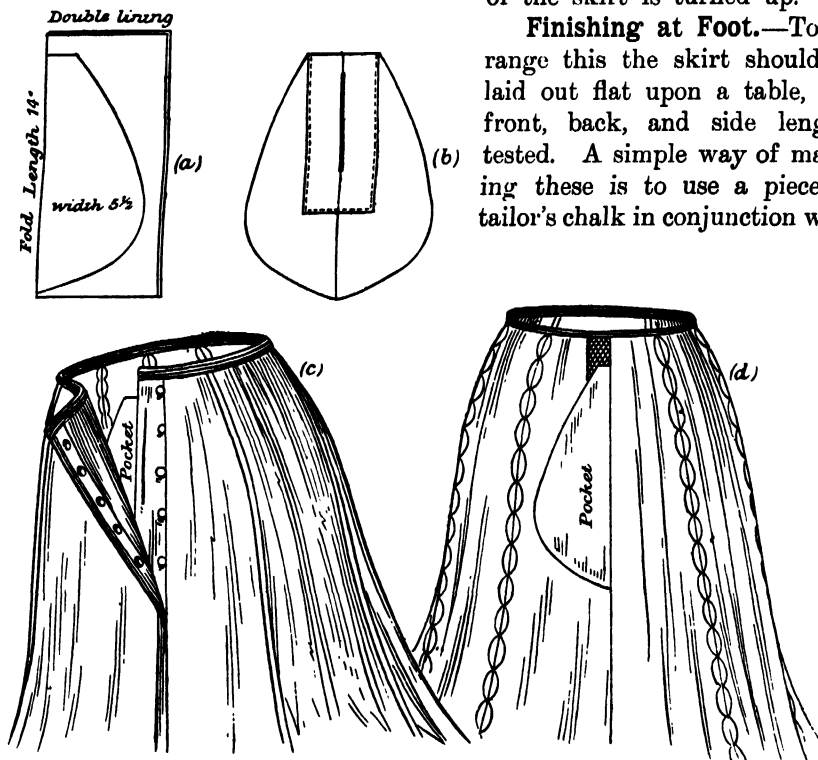


Fig. 415.—Pockets.

(a) Cutting out pocket in lining; (b) Pocket open with facing placed on slit; (c) Pocket inserted at side opening; (d) Pocket inserted at back opening.

the tape measure. Place the top of the measure to the band of the skirt, and, holding the chalk and tape together at the various required lengths, sweep a line with chalk in circular form. When this has been done on one side of the skirt, turn over, and mark exactly the same on the other side. The skirt must then be turned up to the chalked line, but before doing this tack a piece of tailor's canvas, about 4 inches in depth, and at about $\frac{1}{4}$ inch distance from the chalk line, all round inside the skirt. This canvas must be cut on the bias, and the hem of the dress must be slip-stitched over it. This hem must have been previously pared, leaving a turnover of about $\frac{3}{4}$ of an inch. Now attach the canvas to the lining by slip stitch, taking care that no stitch goes through the material, and finish by a facing of cloth or lining cut on the bias, and sufficiently wide to cover the canvas.

In inserting canvas it is not necessary to join it; each length may be laid slightly over the other, but in the facing of material or lining all joins must be carefully stitched and pressed before being tacked to the skirt. After being carefully basted into position, the facing is hemmed at top and bottom, no stitches to be brought through to right side (see fig. 416, *a*).

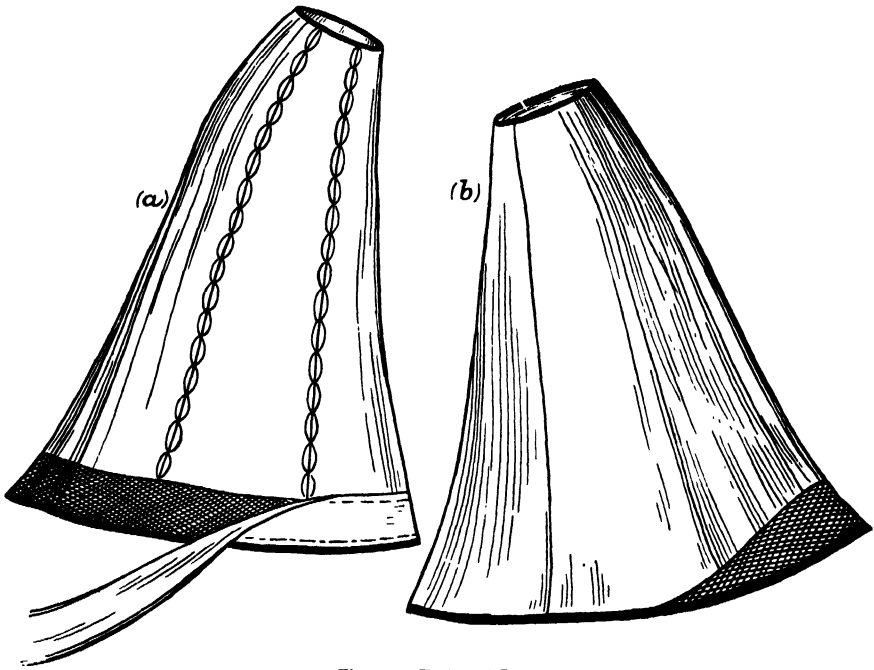


Fig. 416.—Facing of Dress.
(*a*) Ordinary method; (*b*) Tailor method.

Fig. 416, *b*, shows the bottom of a tailor-made skirt where the seams of material and lining have been stitched separately. In this case the false hem or facing is dispensed with, and the canvas is inserted between the lining and the material. To prevent the hem or the foot of the dress from wearing, it should be finished with a brush braid.

SIMPLE TRIMMINGS.

Braiding.—Braiding is one of the most usual trimmings, and is effective as well as economical. It is made in all widths and in many styles, is rarely out of fashion, and, while it gives plenty of scope for originality in simple or elaborate designs, combines well with embroidery.

Military and all flat braids may be very successfully machined on, but this should be only at the top edges; if sewn down at the bottom also they are very apt to pucker. Tubular or circular braids are much used for

for finishing the edges of the front, basque, sleeves, and s; and these and also narrow flat braids may be arranged according to numberless designs, the trefoil, perhaps, being one of the favourite patterns. A trefoil consists of three loops, one in the centre and one on

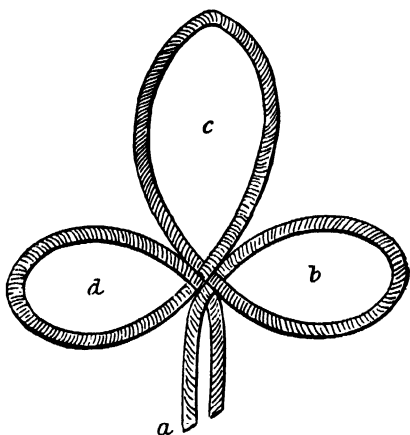


Fig. 417.—Trefoil of Braid.

either side, the centre loop usually being a little larger than the others. The loops cross in the centre in the form of a small darn which makes the pattern stronger; the sewing together is done from the back. Following fig. 417, begin at the bottom left-hand side at *a*, bring the braid round to form the loop on the right-hand side (*b*), then over the first end and up to form the centre loop (*c*), bringing the braid round from the left to the right-hand side; next, bring it down over the bottom of the centre loop and across to form the loop at the left-hand side (*d*), and finally round and

down under the first end or starting-piece. When thus sewn together, the inside of each loop must be gathered round with fine sewing silk and drawn up sufficiently to make it lie flat.

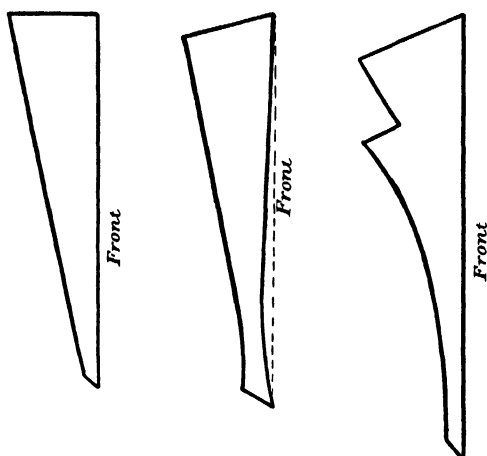


Fig. 418.—Revers.

Elaborate designs, either in very narrow or wider braid, are worked over a traced paper pattern, and for amateurs especially they are better if sewn by hand. When finished, the paper is torn away from under the braid. Flat braiding of all kinds will look much better if well pressed under a slightly damped cloth when finished.

Revers. (See fig. 418).—Originally revers were made by turning back the front edge of the bodice and putting in a vest; now it is more usual to cut them separately and lay them on the

bodice. One edge should be cut on the straight of the material and one on the cross, and in order to give a good appearance to the figure they usually taper to the bottom; they are sometimes cut with both edges hollowed in slightly at the waist, but it is more usual to keep the

straight edge, that is, the one which is placed nearest to the fastenings, quite even all the way down. A good average width is about $3\frac{1}{2}$ inches at the top and 1 inch at the bottom when finished. The straight side is usually carried up to where the vest meets the collar, and the revers are cut straight across the top from that point; but many varieties are made, and the outside slanting edge may be shaped in numerous ways. The revers must be lined with stiff muslin or French canvas, and faced with silk, sateen, or any such thin material. It is better to place them on the bodices while they are on the figure or dress-stand, because, as they are put over the full part of the body, due allowance must be made for the curve. If they are put on too tightly the bodice will appear puckered underneath.

Cross or Crossway Bands.—The material for cross and crossway bands must be cut exactly on the cross, that is, diagonally, and not just a little on the slant, as this would warp and pull out of shape. To cut material on the cross, fold a portion of the selvedge straight across the material with its edge lying along the weft threads (the threads running across any fabric). Cut through the cross fold thus made, and take the strips for the bands always in this slope. If the material is on a true cross the ends of the pieces will be on the straight of the material. Thus, in joining two pieces together the seam will be on the straight, which will make it much stronger and prevent it from stretching out of shape.

Cross bands should be laid carefully on to stiff muslin (also cut on the cross) immediately after they are cut, then pinned and tacked through the centre. The edges are either piped or turned over and lightly hemmed or herring-boned on the wrong side. If piped, they are sewn, in such a way as not to be visible, on to the garment in between the piping and the band; if merely hemmed, they must be slip-stitched, which may sometimes be more easily done from the wrong side with back-stitching or running, provided they are first well tacked on the right side. The stitches, of course, must not be seen on the right side.

Frills.—Frills are also cut on the cross, and, to allow for gathering, the amount of material is usually half as much again as the length required when finished. A narrow hem is made at the bottom, either by hand or machine, and great care must be taken not to pull the edge out of shape, as cross-cut materials stretch very easily. The top is usually made with a small heading from $\frac{1}{4}$ to $\frac{1}{2}$ inch deep by turning in the material once and putting two rows of gathering, one on the double material and one about $\frac{1}{4}$ inch below on the single material. Both rows should be sewn down to

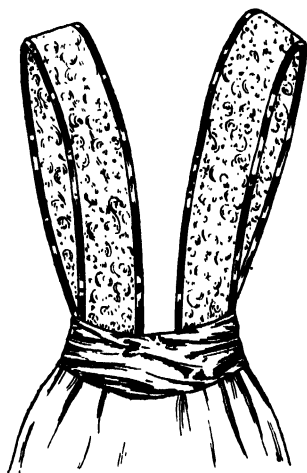


Fig. 419.—Kimono Braces or Bretelles, made with Crossway Bands of Silk and Insertion.

the garment, thus bringing the raw edges of the heading in between, where they cannot be seen.

Kiltings.—Kiltings are cut on the straight and across the material, the amount allowed being from two to three times the amount required when finished, according to the closeness and size of the pleats. A narrow hem is put at the bottom, usually by machine. The top is turned in once about $\frac{1}{4}$ inch deep, and then the kilts or pleats are made from the right side, being tacked first at the top, then about half-way down, and again at the bottom. The pleats may be single, that is, all falling the same way, or box-pleated, when every alternate pleat falls in the opposite direction. After being tacked, the kilt is well pressed on the wrong side, then tacked and machined on to the garment about $\frac{1}{8}$ inch down from the top.

BODICE CUTTING AND MAKING.

Cutting Out. (See Plate H.)—In making bodices it is usual to cut out the lining first, as it forms the foundation of the work and must be well fitting, even if the design of the whole bodice is loose and full. $1\frac{1}{4}$ yard of striped silesia lining about 38 inches wide are sufficient for one bodice including sleeves. This lining may be had with a white, gray, or black back, according to the shade of the material to be put over it. For thin silks, transparent gauzes, and similar substances sateens are much used as linings, but they are not suitable for heavy materials, as they are not very firm, and easily stretch out of shape. Fig. 420 shows the bodice pattern placed on lining for a bodice fastened down the back.

Before cutting out the lining, the amount required for turnings should be decided upon; if a perfectly accurate pattern has been taken from the figure, 1 inch turnings everywhere, except for the front hem, should be sufficient. If the pattern is likely to require some alterations, leave wider turnings at the shoulder and under-arm seams; the amount for the front hems is generally reckoned as $1\frac{1}{2}$ inch.

The lining is folded double, selvedge to selvedge, and the pattern placed on as economically as possible, with sufficient space for the turnings between the different pieces. It is usual to begin with the fronts by placing the edge of the basque to the end of the lining with the centre front about 2 inches from the selvedge; then the centre backs can be obtained from the piece at the side with the centre seam next to the fold. The side backs and under-arm pieces can be placed above the fronts, and the sleeves will easily fit into the remainder of the lining. The position of the waist lines in each piece must be carefully arranged before pinning on the pattern; in the front piece this position should be quite straight between the front edge and the first dart, and in the middle back piece it must also be quite straight, so as to procure the right slope for the centre back seam. Generally the side back piece has the waist quite straight also, but sometimes,

when the figure is longer-waisted at the back than in front, it slopes down about $\frac{1}{4}$ inch towards the back. The under-arm piece ought always to have the waist line on the straight, as great strain may be brought to bear upon it from both the front and the back waists, which may warp and stretch it if it is cut at all on the slant.

When the patterns have been well pinned to the lining, the edges of each piece, together with the darts and waist lines, should be marked, or traced with a double tracing wheel (fig. 397), which may be bought for about 1s. at most haberdashers'. The darts and waist lines in every piece must have a single tracing taken through the pattern. To obtain this, lift the wheel, using one side only. It is most important that the tracings should be clearly and accurately done, as by these lines the bodice is sewn together. If each piece is enlarged only as much as $\frac{1}{16}$ inch on each side, the bodice will be over an inch too wide when finished.

The turnings, if not marked by a wheel, may be done with a chalk or lead pencil, but with a little experience the eye will be sufficient guide for the cutting out of each piece. These pieces are laid on the material, which, for a plain bodice, is cut out exactly the same size and in the same way, special care being taken to see that the waist lines are placed quite correctly. For a full-fronted bodice allow a margin of 4 to 6 inches in the material beyond the front hem of the lining, and with such bodices it is usual to make one or both darts in the lining only, and gather or pleat the material over them at the waist. If the fulness is wanted only in the very front of the bodice, the second dart is put in the material and lining together, but this is one of the points that vary very much with fashion.

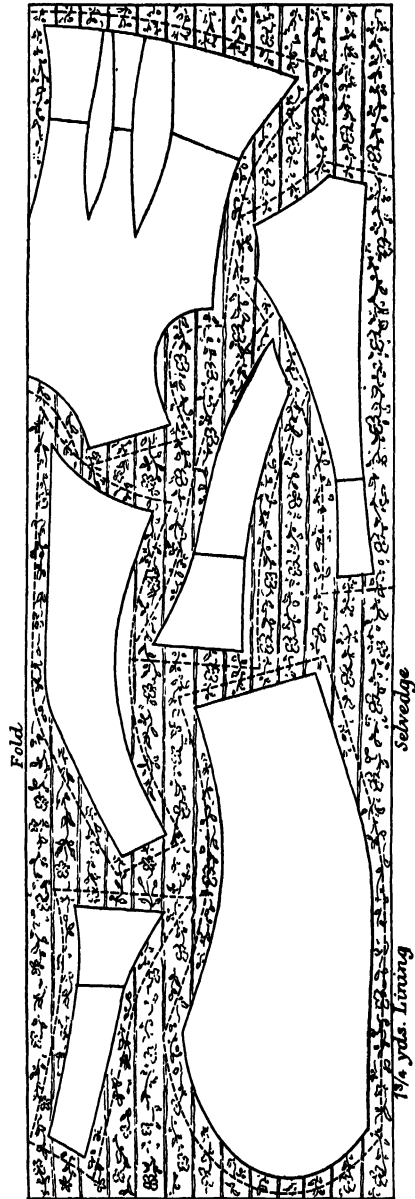


Fig. 420. — Bodice Pattern placed on Lining with Turnings allowed.

When the darts are put in the lining only, a little of the superfluous material at the waist is sometimes drawn away at the under-arm seam; also, if the fulness is pleated at the waist, some of the under part of the pleats should be cut away and then machined well down on the top, in order to make them lie quite flat. For stretched, full, or pleated backs, the side backs and middle back pieces of the lining are joined together first, and the material cut in one piece; in arranging the material on the lining care must be taken to keep it quite straight down the centre; it is, therefore, best tacked straight down to the middle seam before it is cut out. The under-arm pieces of the material and lining are almost invariably made separate from the front or back.

Plaid, striped, or figured materials are certainly much more easily made with the full or stretched backs and full fronts, as it is very difficult to match the patterns if each piece is cut out separately. But if plain, tight-fitting bodices are desired, two important rules must be followed: the waist lines of each piece must be placed exactly on the same part of the pattern, and the pieces must be so placed that the patterns join accurately at the seam from the waist upwards. Plaids are seldom folded quite evenly, so that it is wise to open the material and cut out each side of the bodice separately. Again, some inferior checks and plaids are not woven evenly, consequently it is very difficult to make the patterns match; stretching them in some places, or easing them in and shrinking afterwards, will possibly overcome this difficulty. Striped materials may be cut on the cross in order to make the stripes V-shaped at the centres of the back and front. This improves the appearance of the figure, but unless the material is firm it will quickly stretch out of shape and look puckered or strained.

Tacking.—The tacking of the bodice is very important and must be done carefully. It consists of two operations, the tacking-out or tracing of the material and lining together over the wheeled lines—these are called fitting lines,—and the tacking together of the various pieces by the tacking-out lines.

The material and lining should be well pinned together before tacking-out, and where depressions or hollows occur in the figure the material must be well stretched over the lining, or the lining must be eased on to the material. The principal places requiring this are all parts just above and below the waist and up towards the front shoulder. After pinning, the material and lining may be tacked together with large tackings over all the tracing lines, including the darts and waist lines. Tacking-out the waist lines is most important, and these tackings should not be removed till the bodice is completely finished, as they are constantly required as guides in different parts of the making.

The tacking of the pieces together should be done firmly with small stitches and an occasional back-stitch, so that the seams will not gape when being fitted. Begin by pinning each piece together, so that the waist lines meet exactly; these, when the bodice is finished, will make a complete ring round the waist. The darts are also tacked in the same way; they require

great care in finishing off at the top, or they will "pout", that is, appear full on the right side. To prevent this, let them taper off very gently, and keep them almost straight with the fold for about $\frac{1}{2}$ inch at the extreme top, and then let them curve out very gradually towards the waist.

Tackings of all kinds should be done in bright-coloured cottons, so that they may be easily distinguished from the actual sewing.

Fitting.—If the pattern has been fairly well drafted or fitted to the figure, it ought not to require many alterations; the points already mentioned in the adaptation of patterns will be found of much assistance in the carrying out of any further changes.

Before beginning to fit, very special attention must be paid to the way in which the bodice is placed on the figure, as very often when it is not well pulled down at the back and the various parts are not in their proper position, apparent faults will be noticed which in reality do not exist. It is a good plan to pin the centre back waist to the figure at the very beginning, and next the front fitting lines together, beginning at the waist, in order to bring the waist lines exactly opposite. Another good plan is to tack the under-arm and shoulder seams with the edges on the right side, as they are the most usual places for making alterations. But in altering these seams there is a danger of bringing some of the other seams out of their right positions; for instance, raising the back shoulder too much will bring the curved seam of the back too high, and altering the front shoulder may make the darts too high or too low. Again, taking in the under-arm seam may make the under-arm piece too narrow; and if this is likely to result, it is better to take in only the front side of the seam, and let the remainder be taken equally off the under-arm and side-back at the second seam from the front. If a dress fits well across the back, on the shoulders, and at the chest, but is long- or short-waisted either at the back or front, it is better to alter the actual position of the waist, making it higher or lower by altering it at each seam. In doing this, however, care must be taken to make the waist the narrowest part of each piece; otherwise the appearance will be spoiled. Round-shouldered figures are sometimes very difficult to fit; the back seam may have to be taken in a little towards the neck, but this should be avoided if possible, as apt to increase the defective appearance of the figure, and the alterations are best made at the shoulder. Projecting shoulder-blades require more curve in the side-back seam and possibly also the taking in of the seam a little at the arm-hole; they sometimes cause wrinkles to appear across the back, but these can generally be removed by raising the back shoulders. Wrinkles and creases at the waist in front are frequently a cause of much anxiety to the novice; generally they can be taken away by opening the under-arm seam to a little above the waist, stretching the material well down over the lining, which should be allowed to pucker freely, and then pinning the seam together again on the figure. The side of the second dart nearest the under-arm piece may also require opening, and the material stretching down well, but the lining ought not

to be puckered into this seam, except perhaps just near the top. These wrinkles may also be due to too great tightness in the basque, when the very simple remedy of letting out the side seam may be all that is necessary. In fitting, do not make the bodice too tight, as the machine will draw the seams closer together, and the bones also take up a certain amount of room; though, on the other hand, if large turnings have been left, they will require paring, which will at least counteract the thickness of the bones. Tightness across the bust is a flagrant fault in a bodice, and unfortunately a very common one. It may possibly be remedied by rounding the front, but this is not to be recommended. The fault is generally due to the fact that the darts, and especially the second dart, are too small at the waist; insufficient material having been taken out, enough has not been given to provide for the prominence of the bust; in such cases, therefore, let out the under-arm seam, and make the second dart larger. A strained feeling across the bust is often due to the material and lining being too much stretched down between the second dart and the under-arm seam; the dart must be well stretched down just above and below the waist, but it frequently needs a little easing in towards the top at the under-arm side, and afterwards pressing well, so as to make the fulness imperceptible on the right side. A small pleat put in the front lining about half-way down the under-arm seam will prevent undue tightness and straining in some figures.

Cross or diagonal creases from the top of the shoulder by the neck down to the fall of the arm are generally to be traced to the shoulder seam being too tight at the top and too loose at the bottom; therefore, to remove the creases, let out the seam a little at the neck and take it in near the arm-hole. Fulness at the top of the darts may mean that they are too large for the figure, but it may also be due to bad tacking or machining at the top (see "Tacking"), or to their not being the right height. Shrinking under a damped cloth, or filling-out by padding with cotton wadding, may remove the fulness, but in most cases it is quite worth while to undo and alter the darts. After fitting, all alterations must be carefully re-tacked before the bodice is sewn.

Stitching.—Stitching may be done by hand or machine; if by the former, it must be very close and firm, so that the seams will not give and look loose on the right side; and if by the latter, the stitch must not be too small or the tension too tight, otherwise the stitching will crack and break in wear. Whichever way it is sewn, great care must be taken to put the stitching exactly on the traced lines, and to keep all the seams on a gradual curve in to the waist. This is one of the most important things in bodice-making, and if badly or irregularly done, will entirely spoil the cut of the garment.

Overcasting.—The tacking threads are removed from the seams after the stitching is finished; this is rather tedious work, and a sharp-pointed pair of scissors will be found very helpful. The threads should be cut at intervals and drawn gently out, not pulled and broken, as this would probably stretch the seams. Then the seams are pared, $\frac{1}{2}$ -inch turnings being a

very average width, and each one notched across at the waist to within $\frac{1}{4}$ inch of the stitching. Some of the seams, especially the curved ones, will require one or two notches above the waist, the object being to make the seams lie quite flat when they are opened and pressed. The edges are made neat by overcasting, a stitch something like seaming, except that it is worked from left to right, and that the needle is put in slanting a little from the right to left. Six stitches to the inch, about $\frac{1}{4}$ inch deep, are advised for bodice seams.

Pressing.—After overcasting, the seams are ready for pressing as described in skirt-making (see fig. 421). The iron must not be too hot, as great pressure is needed, and it must not be passed up and down the seam as in ordinary ironing, but lifted up and laid down on each part separately,

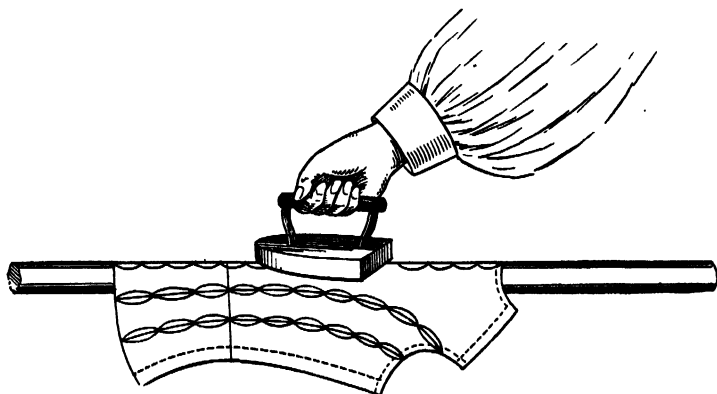


Fig. 421.—Pressing Seams.

so as not to stretch it. If the material is very thick, dip the tips of the fingers in water and run them lightly down the seams before pressing, but merely damp, and on no account wet them, or the material will shrink and pucker on the right side.

Fastenings.—The two principal standard fastenings are: (1) Buttons and button-holes; (2) Hooks and eyes.

Button-holes are placed on the right-hand side of the bodice; the edge is turned in to $\frac{1}{4}$ inch beyond the fitting line, that is, the place where the bodice was pinned together in fitting, and tacked firmly. Then the material and lining may be hemmed down on the wrong side, making a hem about 1 or $1\frac{1}{4}$ inch wide, or they may be cut away about $\frac{1}{4}$ inch from the edge, and the bodice faced with silk, ribbon, &c. In the latter case it is wiser to slip in an interlining of French canvas, and the facing should be puckered or a little full to prevent it from dragging round the button-holes. The facing is turned in once at each side and hemmed on to the bodice; the stitches, whether faced or hemmed, must not be taken through to the right side. Small button-holes are placed about $\frac{3}{4}$ inch, and large ones about 1 inch apart, and the outside end should just touch the fitting line. This end is made either oval or round to allow the button to pass easily through, and

the inside end is barred to keep the button-hole closed. The first button-hole must be made on the waist line; the stitch is usually worked from left to right, beginning at the bottom left-hand side of the silk. If the material is likely to fray, the slit may be overcast first with thin silk or cotton; a small wedge-shaped piece may be cut from the slit at the rounded edge, and the slit drawn into an oval shape in working. The stitch should have a double purled edge, which is obtained by passing the cotton from the eye of the needle over the point to the left, under it to the right, and then drawing the needle through, bringing the loop thus formed to the edge of the slit. The bar consists of a small button-holed loop across the inner end of the button-hole, with the purled edge meeting that of the button-hole.

Buttons are placed on the fitting line at the left-hand side of the bodice, beginning at the waist line. If the buttons and button-holes are

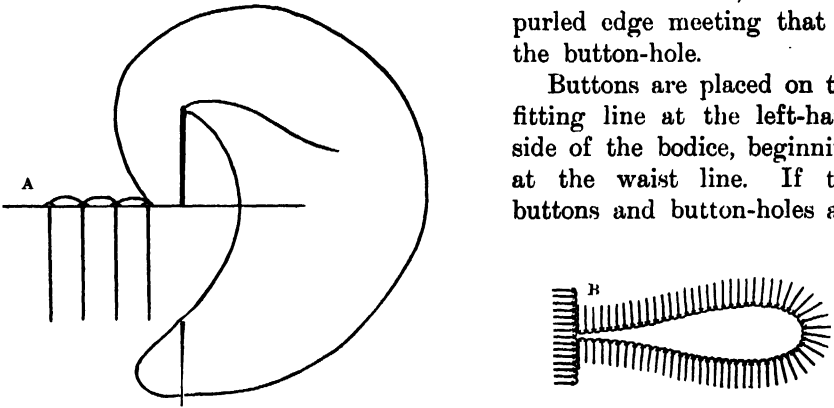


Fig. 422.—Button-holes. A, Stitch. B, Oval Button-holes.

not exactly opposite each other, the front of the bodice will twist and appear crooked when worn. A stand or fly, about 1 inch wide, must be left beyond the buttons to lie under the button-holes; it is made by hemming the bodice back just over the fitting line if the turnings are sufficiently wide to allow this, or else by cutting off the edge of the bodice about 1 inch beyond the fitting line, and facing it back with silk, &c.

For hooks and eyes, which are sewn on with their outside edges just touching the fitting line, both edges of the bodice should be turned in $\frac{1}{8}$ inch beyond the fitting line, and well tacked. Medium-sized hooks and eyes are placed about $\frac{3}{4}$ inch apart, beginning at the waist line; all the hooks may be placed on the right-hand side of the bodice, and the eyes on the left-hand side, or, if preferred, they may be placed alternately. The stitching must not be carried right through to the right side of the bodice, but must be taken through the two thicknesses of lining. After sewing on the hooks and eyes, cut away any superfluous turnings underneath, and face them back with binding, ribbon, &c.

Boning. (See fig. 424.)—Before putting in the bones decide upon the shape of the basque, and either chalk, or run a tacking, round the edge. The bone casings must be finished off at the top with a pocket, that is, a double piece of binding run together at each side about 1 inch long; below

this the binding is run on each side to the seam, allowing it to pucker a little, especially above and below the waist. The tops of the bones and darts should be on a level all the way round the bodice, and the bones should be finished off at the bottom about $\frac{1}{4}$ inch above the basque line. They must be rounded at the top, and a hole pierced with a pin or stiletto about $\frac{3}{4}$ inch down; they are cut a little longer than the casing, and pushed well in from the bottom upwards with the bodice rounded back over the band. They must be sewn firmly across at the bottom, and the pocket then finished off with a fan of stitches taken through the pierced hole to the top and sides of the binding. The object of the pocket is to keep the top of the bone loose; if sewn down to the seam at the end it will show on the right side of the bodice.

Basques.—Plain basques are either rounded or pointed. The rounded suit a slight and the pointed a stout figure. Pointed basques are cut about 3 or 4 inches deep in the front and back, and 1 to $1\frac{1}{2}$ inch at the hips. The point should be cut sharply and not rounded, especially in the front. To get both sides of the bodice alike, measure down at intervals from the waist line. Round basques are measured down 1, 2, or 3 inches everywhere from the waist line. Both shapes should be marked with chalk, and turned back and tacked from the

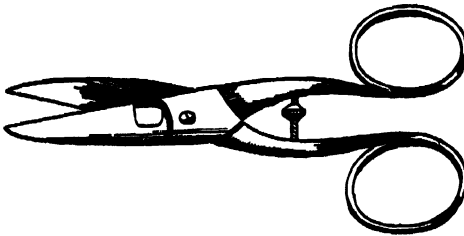


Fig. 423.—Button-hole Scissors. The gauge is set by means of the adjustable screw between the handles.

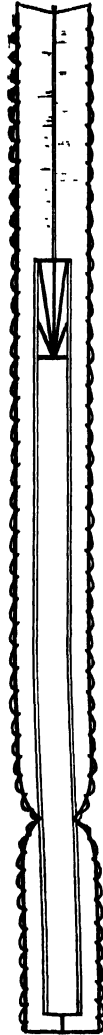


Fig. 424.—Seam showing Overcasting and Boning.

right side, care being taken to keep the edge in a continuous curve and not stretched in the least. To finish them, cut away the material on the wrong side, leaving a small turning of about $\frac{1}{4}$ inch at the edge, and face it back with binding or some thin material cut on the cross.

SLEEVE-MAKING.

Cutting Out. (See fig. 425.)—In cutting out, the pattern must be placed on the lining, with the selvedge running lengthwise; if there is no line drawn on it to indicate which part is to run straight with the thread, it is a good plan to put the top and bottom points of the inner seams in both the upper and the under parts in a direct line; that is, at the same distance from the selvedge. The elbow and arm-hole points must be carefully marked on the lining with the pencil or tracing-wheel, and the edge of the pattern traced round. Half-inch turnings are usually sufficient for the sleeve, unless there is a likelihood of its being too narrow, in which case an inch had better be left at the outer seam. For plain sleeves the material is cut out the same size as the lining. Full and fancy sleeves must be dealt with according to the prevailing fashion.



Fig. 425.—Pattern of Model Sleeve.

Tacking.—Pin and tack the material to the lining, keeping the stitches on the tracing lines, and on no account stretch the material or pucker the lining, as this would make the sleeve wear badly and appear strained. To put the sleeve together, first lay the upper piece on the table with the inner seam inside and the material uppermost. On this place the under

piece with the lining outside; it must lie perfectly smooth, with the arm-bend points meeting, and the tracing lines together. Next pin and tack the inner seam, taking care that the two pieces lie quite flat one on the other. While they are still in the same position, begin to join the outer seam by folding over the outside edge of the larger piece to meet that of the smaller. It is better first to pin this seam together half-way between the elbow and the wrist and then half-way between the elbow and the arm-hole; afterwards continue pinning the whole seam and then tack it, gathering the fulness at the elbow on the upper sleeve to fit the curve of the under sleeve. If the outer seam is correctly put together it will lie quite flat, with the inner seam to the inside edge and a smooth fold to the outside beyond the outer seam.

Fitting.—Place the sleeve well on to the arm with the elbow and arm points exactly in the right position. Then hold the arm straight out on a level with the shoulder, and see that the inner seam points in a direct line from the fall of the arm to the thumb; if it twists over or under at the wrist, the sleeve has probably not been put together properly, and the seam must be altered. Also notice if the curve of the seam is sufficiently deep; if it is not, there will most likely be some creases across the seam at the arm-bend. On the other hand, it may be too much curved, in which case it will bulge or stand out at the wrist, and possibly at the fall of the arm also. The curve must be taken in or let out as is necessary, and the length of the sleeve should be regulated at the top or at the wrist as required, without altering the position of the arm-bend.

If possible all the alterations should be made at the outer seam, taking it in or letting it out if it is too loose or too narrow; the length must be regulated, as in the inner seam, at the arm-hole or wrist, so as not to alter the position of the elbow.

Before removing the sleeve, see that the curve at the top of the undersleeve slopes down sufficiently from the outer seam to the front of the arm. If it is too straight it may cause wrinkles at the top of the inner seam, or it may drag and feel uncomfortable at the elbow. To remedy this, either hollow it out a little more towards the inner seam, if the length of the sleeve will allow, or join a small wedge-shaped piece in towards the back seam; if neatly joined and well pressed, it will hardly be seen, as it is on the under part of the sleeve.

Overcasting and Pressing.—After fitting the sleeve, machine or stitch it closely by hand, then pare and flatten the seams, overcasting the edges. Take care to notch the inner seam at the arm-bend. The pressing is done in the same way as for a bodice.

Facing.—The wrist is finished by turning back the edges to the wrong side and tacking them down from the right side; they are then faced with binding or thin material cut on the cross, which is hemmed at both sides, and covers the raw edges of the sleeves—the stitches, of course, not showing through on the right side. When finished, it should be well pressed.

Putting Sleeves into Bodice.—This presents a real difficulty, especially to the amateur dressmaker, but if the rule of fitting the back seam of the

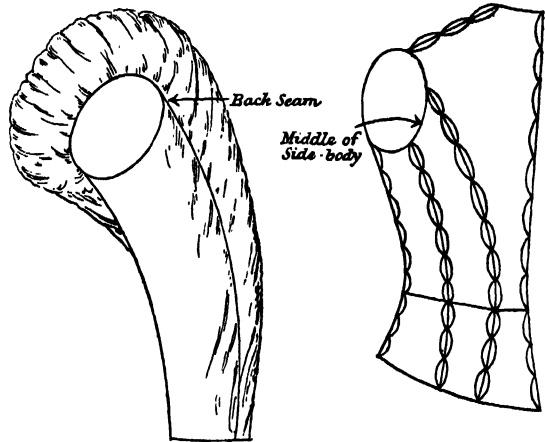


Fig. 426.—Putting Sleeves into Bodice.

sleeve to the middle of the side body at the arm-hole be strictly adhered to, success will be ensured (fig. 426). First gather or pleat the fulness at the top of the sleeve till it fits the arm-hole of the bodice. Place the sleeve in, and pin into position as described above. Regulate the fulness, and allow one-third of it to the back of the sleeve, and two-thirds for the front. Tack the sleeve into the arm-hole, and stitch in. Pare off inequalities of seam, and neaten by overcasting or binding of some soft material.

COLLAR-MAKING.

Cutting Out.—Plain upright coat collars have an interlining of some stiff material, such as upholsterers' buckram. A very stiff circular webbing, which is very generally sold, has the advantage of being already shaped to fit an average neck. Some dressmakers prefer several thicknesses of French canvas well machined together, as they are able to stretch it a little at the bottom and so make it fit more closely to the bodice. The stretching is usually done by ironing. It is also a good plan to rub a piece of soap once or twice across the collar and then to iron it so as to stiffen it a little more.

In any case, it must be cut exactly to the size of the collar desired when finished, care being taken to cut the edges smoothly and evenly. The material is cut out about $\frac{1}{4}$ inch larger everywhere; a few dressmakers do this entirely on the cross, but the majority place the centre of the back quite on the straight, with the selvedge or warp threads running down, thus bringing the fronts only on the cross. This method is certainly to be recommended when making up figured or striped materials, as it causes the centre backs of the collar and bodice to fall in the same direction.

Tacking and Making. (See fig. 427.)—If the material is at all thin, it should first be lined with sateen or some thin muslin, such as leno. This is cut the same size as the material, and the two are tacked evenly along the centre of the stiffening. Next, bring the $\frac{1}{4}$ -inch turning over to the wrong side and draw them together with long V-shaped stitches taken alternately at the top and bottom. Be careful not to draw the stitches too tight—yet at the same time the material must be quite close and smooth—and then sew down the turnings at both ends to the canvas. Next, sew on two or three hooks and eyes at both ends, putting them sufficiently far under to make the collar meet and close properly without gaping when they are fastened.

The facing or lining of the collar is cut the same size as the material, that is, about $\frac{1}{4}$ inch larger everywhere than the stiffening. It may be made of silk, sateen bodice lining, or some similar material, and if a white collar is to be worn underneath, it is wiser to choose a light-coloured lining, dark dyes rubbing off very easily. The lining is turned in about $\frac{1}{4}$ inch at

the top and ends, then notched a little at intervals to make the turnings lie flat, and tacked through the centre to the inside of the collar. It is better, before putting in the facing, to bend the collar slightly round as though it were on the dress, so that it will not be pulled or puckered inside. After tacking, hem down the facing at the top and ends about $\frac{1}{2}$ inch below the edge of the collar, and let it cover the stems of the hooks and the lower parts of the eyes, just leaving enough of the ring outside for the hook to pass through. This portion of the eye should be button-holed over with silk or cotton matching the colour of the dress.

Putting on to Bodice.—The collar is now ready for putting on, and this, if possible, should be done while the bodice is on the wearer, or on a dress stand; otherwise, put the bodice over the knee, bend it round to

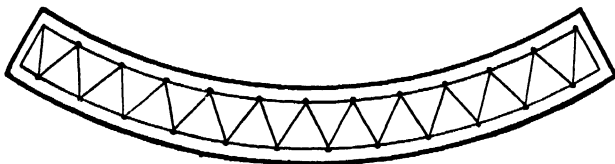


Fig. 427.—Collar. Method of drawing edges together with long stitches.

the front as though it were on a stand, and pin on the collar while it is in this position. The bottom ends of the collar must be brought only as far as the front fitting lines—i.e. to the outside edge of the button-holes on the one side and in a line with the buttons on the other. This is a very important matter, as, if arranged any other way, the collar will not fasten exactly in the middle of the bodice. Pin the collar in its right position in front and also in the centre of the back, and then tack it all the way round, still keeping the bodice in the same position. About the middle of the front neck on either side, that is, half-way between the shoulder and the front fastenings, draw up the material a little under the collar, and slightly ease down the lining underneath to prevent the bodice from wrinkling below the collar. The collar may now be stitched firmly on the wrong side, first paring the neck of the bodice if the turnings are at all deep, and then notching them at short intervals; the sewing-on should be firmly done, with some of the stitches at any rate taken through the stiffening, but none, of course, must be carried through to the right side. The lining of the collar is then hemmed down over these stitches, and the little piece of the bodice beyond the button-holes drawn up to the corner of the collar under the facing. Finally, button-hole, overcast, or bind the top of the button stand, that is, the piece of the bodice beyond the buttons. Sometimes collars are machined on from the right side, but this needs very careful management, and should be attempted only by experienced workers.

EMBROIDERY.

It is not proposed here to enter into a detailed history of the art of embroidery, but briefly to consider, from a practical stand-point, some of the more important branches of it.

Needlework for the home is a large subject, as there are in daily use many articles the beauty and value of which can be greatly increased by the skilful embroideress. Curtains, bed-spreads, cushions, and table-covers will occur to everybody, while among smaller articles may be mentioned blotters, book-covers, photo-frames, screens, and panels.

Embroidery applied to dress, when rightly executed, is in its proper place. It is an addition which cannot always be purchased, lending a touch of individuality to what would otherwise be but commonplace. Belts, collars, panels, revers, and straight and shaped trimmings generally, varying in style and form with the fashion of the moment, can be worked for many a costume. Hat crowns are often of silk and velvet, embroidered with gold threads, beads, and silken stitchery. Dresses, again, have always provided a favourite background for fancy work, and are likely to continue to do so, and also coats of every sort, especially those for evening wear. Presents for men may consist of embroidered braces, slippers, tobacco pouches, initialled handkerchiefs, and such things. Work, white or coloured, for the service of the church, commends itself to many who have money and ability to accomplish it. It necessitates the use of the best of materials and skilled labour, but the consideration of its special features need not be entered upon here.

Fabrics.—Before commencing any piece of work it must be decided with what materials the undertaking is to be developed; that is, with what fabrics, working-threads, and tools. By fabrics are meant those materials upon which the stitchery is to be executed. They may be roughly divided into silks, woollens, linens, and cottons. In the silk class there are the various plain and figured materials known under the one general name; also satin, brocade, plush, and velvet, in many makes.

Woollen fabrics are principally employed for articles of considerable size—for covering furniture, for sofa rugs, and so on. The popularity of the so-called “art” serge is due to its satisfactory range of colouring and useful texture, and also to the fact that it adapts itself, according to the wishes and contrivance of the worker, to elaborate as well as to simple treatment. Various plain and fancy kinds of other woollen fabrics are also used for embroidery; their names and details of manufacture are perpetually

changing. The members of the linen and cotton class vary chiefly in texture. The coarser makes of canvas are used for furniture covers, and the finer for lighter articles. Cotton, linen, and damask are largely employed for the service of the table and in the bedroom, being adapted, according to weight and quality, for table-cloths, napkins, sheets, pillow-cases, pillow-slips, and towels. The finest linens of all are the lawns and cambrics used for handkerchiefs and d'oyleys.

Great preference is shown for hand-woven, moderately coarse linens, and these are to be had in great variety, in every way worthy of the attention of the embroideress. The Ruskin hand-made linen may be mentioned as a typical specimen of the class, and there are other makes prepared in varied and good tints, each useful according to its nature, for dresses or blouses or articles connected with the home. Indeed, linen frequently takes the place of silk, and is embroidered with rich materials and gold thread, and used for small and dainty as well as for coarser things. To embroider it in flax threads is, however, in better taste.

Working Threads.—The threads with which embroidery is executed are usually silken, woollen, or linen. Among them crewel silk takes a high position. It is moderately coarse and twisted, so that, unlike other makes, it cannot be split to obtain a finer strand. Short needlefuls only should be used. If carefully worked in, these have the appearance of exceedingly minute cords. Giant or rope silk is a much coarser member of the same class. Filoselle, floss, and filo-floss silk may be mentioned together. The two last named are very brilliant, but require care in handling, as they are easily rubbed and fretted. Any of these three makes of silk can be passed as a single thread through the needle, or divided so that one, two, or more strands only are used at once, making finer or coarser stitches as required. Ordinary sewing silk is occasionally employed for minute outlines. Chenille and arrasene may be included here, both much used in embroidery. The former substance is a tiny, round, fluffy strand; the latter is flat, more like a minute silk ribbon deeply fringed along both edges. Arrasene and chenille are sometimes sewn down with tiny stitches of some finer silk.

The woollen threads range from double Berlin wool, used for large things such as portières, through all the more ordinary makes prepared for knitting and crochet to tapestry and crewel wool. Tapestry wool is coarser than crewel wool, and is also harsher in texture; both makes are used for outlining and for fillings.

Of the linen threads, some are so fine as to be used for making lace, while the giant flax threads resemble soft linen cords. Many of these flax threads enliven, by their colouring and bright surface, the duldest background; the white makes, worked upon cream or white material, are always cool-looking and satisfactory. As there are many varieties, it is well, when selecting them (and indeed all materials), to apply to a large firm, not to small houses, where the stock often includes only the commoner sorts.

In cottons there is much choice. On canvas, "ivory" and knitting

cottons are used, and for the ever-popular cross-stitch other and special kinds are prepared. Certain German cottons are soft and well coloured for embroidery on linen or cotton fabrics; each variety has its own name and characteristics, while new kinds are frequently being introduced. In addition to the threads mentioned there are many new fibres in appearance resembling silk, and often mistaken for that material, such as Peri-lusta.

Gold and silver threads range from "passing" (the finest kind), with which a needle can be threaded and stitches made in the usual way, to the coarser Japanese thread, which is sewn in place with fine and strong silk (horsetail) specially intended for the purpose. Only the best tinsel should be used, as it is the most enduring. In working with certain kinds, the cord should be occasionally slightly twisted with the left hand, to prevent it from uncurling and showing the coloured core or centre.

Cords, gimps, and other "finishes" can scarcely be described as working threads, so that they need not be considered here.

Tools.—The tool most necessary to the worker is the needle. First there are the sewing-needles or "sharps", obtainable in many sizes. Some workers prefer the "scientific" kind, in which the eye is so flattened that when threaded it occupies no more space than does an ordinary unfilled needle. The holes made by it are correspondingly smaller and neater, and this is an advantage, especially in fine work. Darners need little description, they are long in the eye and sharply-pointed. Tapestry needles are stout, with oval eyes and blunt points, which render them suitable for work on canvas. Chenille needles are like them, but have sharp points. Rug needles are like tapestry needles, but are larger and intended for coarser work.

Of pins, the best quality should be used, as those of inferior metal are apt to injure the fabric. For lace and other small work, "lils" (lilliputians) are useful; short whites are a good average make and size, while real steel pins are procurable in all sizes, and well worth their price. Needle-pins are, as their name implies, as fine and sharp as good steel needles. Larger steel pins with coloured heads are employed in lace-making, and for similar purposes.

Much good work can be done with thimbles of metal, steel, silver, or aluminium; those of ivory are the best of all, as they do not fret or tease the silks.

Of scissors there are many sorts, but any ordinary worker may be content with three pairs: a moderately large pair for cutting fabrics, a small pair with sharp points for snipping threads and doing small tasks, and a stronger, older pair for rough use. If each is reserved for its special function it will last all the longer.

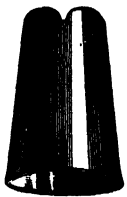


Fig. 428.
Shield for Left
Forefinger.

Among smaller additions to the work-basket may be mentioned a shield for the left forefinger (fig. 428), to save it from pricks during stitching, and a stiletto for eyelet-holes or perforations through which to push ends of cord or braid. A piece of wax often serves to smooth down a roughened

strand of silk or thread. Workers who do their own designing should add transfer-paper or linen, and an agate style or tracing-wheel, to their ordinary drawing materials.

The higher kinds of embroidery are executed in a frame (fig. 429). This is composed of four laths, fitting together so as to form a hollow square or oblong, the size of which is regulated by adjustable pegs holding the whole together. The work to be done in it is secured to the top and bottom bars and firmly sewn down the sides to the webbing nailed along the upright pieces. Such frames are often mounted on a stand which permits of their being moved to any desired angle.

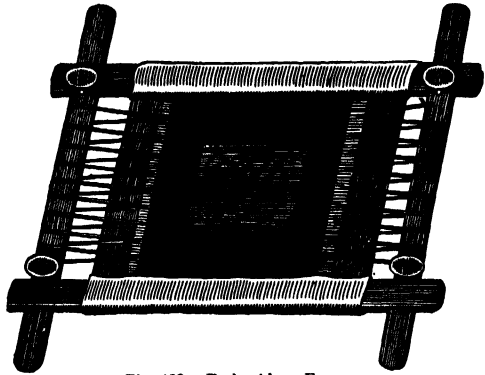


Fig. 429.—Embroidery Frame.

A tambour frame for small articles (fig. 430) is in the form of a double hoop. The material to be treated is laid on one wooden circle, which is mounted on a stand, and it is kept tense by the second hoop, contrived so as to fit closely over it.

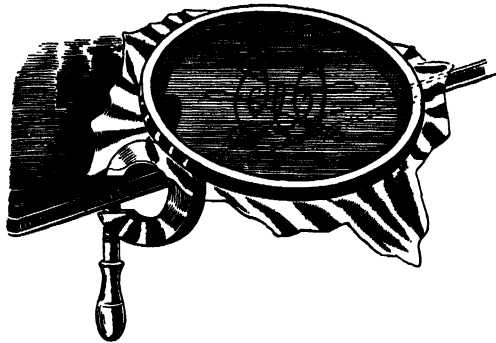


Fig. 430.—Tambour Frame.

Stitches.—The stitches in fancy needlework are employed either for outlinings or as fillings within these outlines. For the former purpose backstitch sometimes serves, but more often the well-known outline stitch shown

in fig. 431 (*a*) is employed. This stitch is also used as a filling and for shading. It is worked from below upwards, the needle being so inserted as to make a stitch on the wrong side of the work only about one-fourth the length of that on the upper surface. The needle should always be brought out to the right side of a completed stitch.

Long-and-short stitch (fig. 431, *b*) is, however, the best for shading, as by its use two different tones become blended before being used separately. It is worked in rows from left to right, the short stitches being about one-third the length of the long ones and put alternately with them. It can be contrived to form a straight or an irregular edge, as the exigencies of a pattern may require.

Button-holing is worked over the raw edges of any cut and pierced portions of a design, and also for outlining, and for surrounding the straight or vandyked edges of work, the superfluous material of which can be cut

away beyond the limits of such stitchery. A variety of fancy button-holing is shown at fig. 431 (*c*), where the stitches are made of graduating heights to form scallops. The loop of thread formed in making the stitch is to be held in place with the thumb of the left hand under the needle until the rest of the working thread is pulled through the fabric and the stitch is nearly finished; it is then released and the stitch gently drawn up and so completed.

Chain stitch is familiar as an outlining, or sometimes, especially in old work, covers the whole design even of figure subjects. The method of

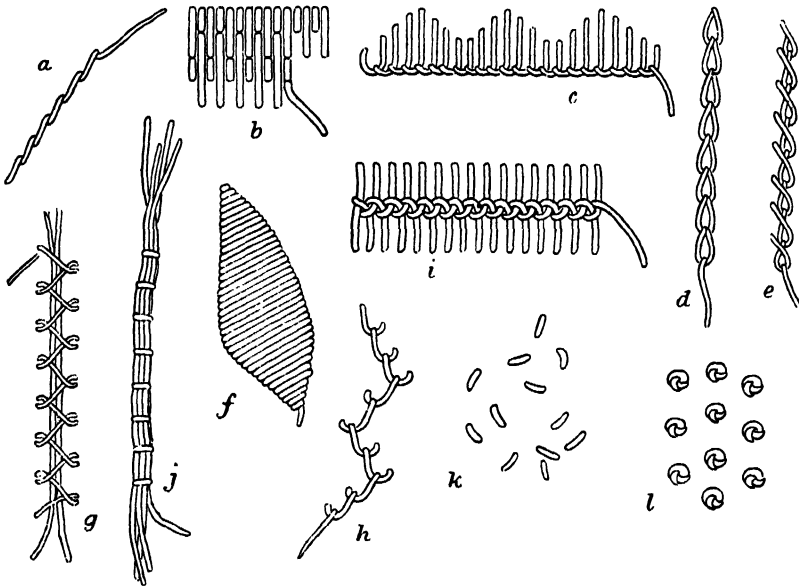


Fig. 431.—Fancy Needlework Stitches.

a, Outline stitch. *b*, Long-and-short stitch. *c*, Fancy Button-holing stitch. *d*, Chain stitch. *e*, Fancy chain stitch. *f*, Satin stitch. *g*, Herring-bone. *h*, Feather or coral stitch. *i*, Oriental stitch. *j*, Couching. *k*, Dot or seed stitch. *l*, French knots.

working it may be seen at *d*. As in button-holing, the left thumb should hold down the loop of thread under the needle until the stitch is otherwise finished and ready to be drawn up and so completed. A fancy kind of chain stitch, easy to do yet somewhat uncommon, is that shown at *e*. It is worked by commencing each fresh stitch at the left side of the base of the last one made, instead of into that stitch in the usual manner.

Satin stitch is of universal application for details which may be entirely covered. It is illustrated at *f*, and a point to be noticed is its adaptability for figures of every shape. Fine scroll-work as well as large and important portions of a design are worked in this way. Satin stitch is often raised over a grounding of darning executed with soft cotton. Initials and monograms are frequently worked thus in this stitch.

Darning is often elaborated and turned to account in fancy needlework, so as (in old-fashioned damask darning) to afford not merely colour but also tones of light and shade in different portions of the design. Simple running, which is sometimes used in embroidery, differs from darning in that the stitches are less formally set.

Plain workers are familiar with herring-boning. It is executed from below upwards, the small stitches being made to the right and left hand alternately. In fig. 431 (*g*) it has a line of other thread run in and out down it. This addition may be coarser in texture than the working strand, a cord or braid, for instance, and affords an opportunity for introducing a second colour into the work.

Coral stitch is like a succession of chain stitches made in sets of three, first to the right and then to the left, and always in a downward direction. It should be evenly done, and needs care in the sloping when it is carried round curves and angles. This feather or coral stitch also takes many forms; a familiar variety is shown at *h*.

Among the many Eastern or Oriental stitches, that illustrated at *i* is the simplest and most effective. It is begun at the left side and a little below what is to be the centre of the band. An upward stitch is first made, the needle being brought out to the left of the stitch and slightly above the middle limit; the second stitch is exactly similar but taken in a downward direction, and the needle is brought out just below the centre. These two stitches are repeated for the length required.

Couching is the sewing down of a cord, or of several strands of wool, silk, or other thread with some contrasting material, and is seen in its plainest form at *j*. In outlining, and for a filling, several lines of couching are frequently employed, and the restraining threads may give both colour and shading, as when a dark-coloured thread is sewn down with one of lighter tint, or gold tinsel with some bright-hued silk, the effect produced being almost as if the silk were reflected in the tinsel, or as if the tinsel were "shot" with the particular colour employed. The couching threads are often arranged in a pattern. The simplest variety is brick couching, where the stitches in each row exactly alternate with those in the next one to it. Designs of diamonds and still more elaborate forms are contrived on the same principle.

Dot or seed stitches are single back-stitches, usually sprinkled haphazard over the background, as at *k*.

French knots, for dotting about, or for forming the centres of flowers, are made by winding the thread from two to four times round the needle before returning it to the wrong side of the work. They are shown in fig. 431, *l*.

Bullion knots are sometimes similarly made, but the thread is put many times round the needle, and the latter is pushed through at some distance from its point of exit, so as to form a long stitch like a close and tiny screw.

Other stitches belong especially to particular kinds of work. With a

knowledge of the more important, as here given, the worker will soon attain the power of adapting and inventing an immense variety of fancy stitches for herself. The study of good antique embroidery is also helpful.

TRANSFERRING DESIGNS.

Whatever design is chosen for development in embroidery it must, before the work is begun, be transferred to the background. It should first be drawn perfect in all its details upon moderately stout paper, which should be laid upon the material and secured there firmly with a sheet of transferring paper or linen between the two. If the lines of the design are then followed with a hard pencil or any bluntly-pointed instrument, they will be found, on moving the paper, to be reproduced upon the material below. Transferring cloth or paper can be procured in various colours, and a tint should always be chosen that contrasts with that of the background on which it is to be used.

Pouncing a Design.—Very delicate fabrics are apt, unless carefully treated, to become smeared with the colour of the transferring linen, but in the case of plush or velvet the pile does not take the impression sufficiently clearly. In both these cases “pouncing” is the better way of marking the pattern. This is effected by running a tracing-wheel or sharp style along the lines of the design drawn on the paper. They are thus marked by trails of small holes. The paper is then laid in position on the textile, and some finely-powdered chalk of a suitable colour, tied up in a muslin bag, is smartly rubbed over the surface. The chalk, sifting through the muslin and the perforations in the paper, leaves the pattern marked out on the fabric below in a series of tiny dots of colour. These dots should be connected, and any omissions should be supplied by means of a fine brush full of paint of the required colour, and as dry as possible.

Precautions when Transferring Designs.—In whatever way a design is marked upon a fabric care must be taken to get the lines as delicate as is consistent with clearness, otherwise it will be difficult to conceal them with the stitchery in the finer details of the work.

Embroidery to be executed in a frame should be stretched in it before the pattern is traced. To ensure sharpness of outline, it is well to have a hard smooth surface, such as a sheet of glass, or a piece of stout card or wood, immediately under the material to be treated. As it is important that the fabric should not slip while this business is in progress, it should be held down at the edges with weights, or, where possible, with sharp drawing-pins, or even with small nails.

Good original designs are always to be preferred for all branches of art, but those who are not artists can avail themselves of the transfers especially prepared on paper for use in embroidery. In these the choice of designs is exceedingly great, and they are easily applied to the

material. The paper is placed upon it, pattern downwards, and by the pressure of a warm iron the design is transferred to the background. The transfers can be had in more than one colour, and that tint should be used which is conspicuous on the foundation chosen.

For very delicate work these patterns have the disadvantage that the lines composing them are somewhat coarse and so not easy to cover with fine embroidery.

Great care must be exercised in marking on plush and velvet, as they will not bear pressure from an iron. The plush should be held out by one person, while an assistant passes the iron as lightly as possible over it. A plan which does not involve any risk of spoiling the pile of the material is to use the transfer as a traced pattern, making holes along the outlines and pouncing through these in the manner already described.

COLOURED EMBROIDERY.

The term coloured embroidery is applied to such work as is not necessarily executed upon a white or cream background, and includes the ornamentation, in silks, wools, or flax-threads, of many articles for the home made of silk, satin, brocade, satin sheeting, or woollen fabrics.

Kinds of Coloured Embroidery.—Appliqué, ribbon-work, and some branches of canvas-work may be brought under the heading of coloured embroidery; but as these are treated of under their respective titles, they need only passing mention here.

Painted embroidery is one of the most primitive kinds of work. It has lately been sent out with a background of exceedingly coarse linen, upon which the pattern is to be painted with a hard brush full of dye of some suitable contrasting colour. When this is dry, all that the worker has to do is to follow the outlines with thread. Similar work can be carried out on many machine-figured fabrics.

Striped and spotted materials can easily be enriched with stitchery. Stripes may be followed with lines of open stitches which allow the colour of the fabric to appear through them, and spots may be made to serve as the centres of flowers or of stars, long stitches being added to suggest the petals or rays. They may also be merely outlined with silks, or may be used to indicate the positions which round sequins are to occupy.

On such figured materials the embroidery cannot be wrongly and unevenly spaced, as may possibly be the case on a plain fabric if the pattern is designed and transferred by a careless or inexperienced amateur.

As the above remarks show, coloured work may be either exceedingly easy of execution, consisting merely of outlining stitches defining some particular pattern, or it may be exceedingly elaborate, requiring careful shading. On large articles simple stitchery, if coarse, is both effective and appropriate. For example, a golden-brown serge curtain powdered with

huge thistles, outlined merely with rope silks and giant crewels in two or three shades of green and purple, with perhaps a few French knots or other "fillings" to accentuate the design, looks really admirable. For smaller articles, such as cushion-covers, caskets, chair-backs, trinket-trays, fan and opera-glass bags (to mention but a few among many), the work should be much finer and needs more or less elaboration.

Shading.—The highest grade of embroidery is that which includes shading. This, whether executed in silks, wools, or flax, should be so managed that there is scarcely any perceptible difference between a shade and the one immediately next to it. Long-and-short stitch is the most suitable to employ, as in this threads of varying tone are blended before being used separately. Shading can be applied to any designs supposed to be in relief; therefore all naturalistic subjects may be so treated. Face and figure work is the most difficult of all to do correctly, and it is calculated that two years of careful instruction and application are needed before an embroideress can produce anything better than a caricatured likeness of the human form and features. Remembering this, amateurs should avoid the patterns too often offered for outline and other treatment, representing figures, or even flowers and fruit, naturalistically treated. They should rather begin with conventional and geometrical designs, passing on to well-drawn and reliable "pictorial" embroidery as their proficiency increases.

True shading, applied to designs which are to appear raised, is guided, of course, by the same rules in needlework as in any other branch of art; the direction from which the light is supposed to come, the shadows cast by overlapping portions of the design, and all other details, having to be carefully considered and developed in stitches. This kind of shading must not be confused with the mere variation in colouring often seen in conventional patterns, where certain details are in pale and others in dark tones of the same hue, for in these the object aimed at is to produce a harmonious whole, only hinting at the effects of light and shade by darkening the central and more important portions of the design.

Geometrical Patterns.—For geometrical patterns the worker is free to arrange the tints as seems best to herself. Shades of a single colour on a similarly tinted ground often prove quite as satisfactory as do mixed colours. For formal patterns on a pale background, designs worked out in pale opalescent or shell-like tints, such as faint pink, green, and heliotrope, with pale gold, blue, and shrimp pink, if wisely chosen, blend charmingly together. For a brighter scheme such colours as are met with in English eighteenth-century crewel work may be commended. They include magenta, yellow, peacock, rich blue, and various greens, which should be selected together and with judgment. The effect of some embroideries executed in bright colours is much heightened if a little black is introduced, as an outlining for instance.

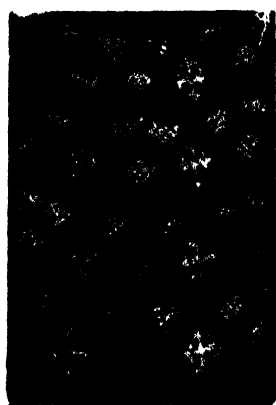
Good and Bad Embroidery.—Work may be gay, but should never be crude; or it may be pale in tone, but need not be sickly. Those who have the colour sense can safely choose, but unfortunately many are destitute of it.



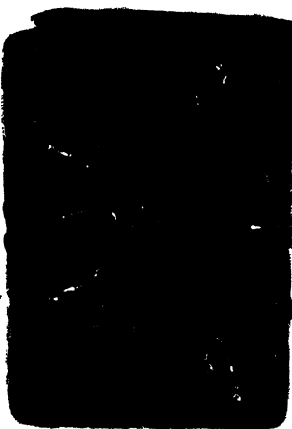
D. Velvet with silk
border. Nineteenth century.



E. Silk border on velvet.
Eighteenth century.



F. Velvet panel with uniform
satin border. Middle of
eighteenth century.



D. Ribbon work on velvet.
Eighteenth century.



F. Ribbon work on velvet.
Eighteenth century.



F. Velvet panel with uniform
Satin Applique.
Middle of eighteenth century. (New York, 1770-1780)



G. Ribbon work on velvet.
Eighteenth century.

The design and execution of all work should be well balanced, so as not to appear heavy with stitches in some places, while but poorly spotted with them in others. Much of our modern embroidery is modelled upon older work, which is well worth study both for the patterns and for the colour-schemes.

With regard to ancient embroidery a more exact definition of the phrase should be given. That which is really antique has an interest and value of its own, owing to the long and patient toil which was necessary to its production. Considering the many appliances of which the modern seamstress can avail herself, modern work does not always contrast favourably with the old, even the colouring of the working materials being frequently less enduring in these days of cheapness and variety.

At the same time, the various schools, such as the Royal School of Art Needlework, in Exhibition Road, the Chiswick Embroidery Classes, the Leek School, and a few others, have a high standard of design, colouring, and execution, and do much to keep up the distinction of one of the most ancient of the arts. But without Technical Schools, we shall never reach the height of skill displayed in France, Germany, and Belgium. Practically, the thousands of pounds' worth of fine embroideries used on ladies' dresses all comes from the Continent. It will be a good day for Britain when we are able to do this kind of work at home.

Pictures in Embroidery.—A few words must be said on the subject of tapestry. There can be no greater, nor at the same time more prevalent, popular error than the supposition that this is all wrought by the needle. Some careless observer first started the idea, which has been handed down even by those who should know better, that the Bayeux and other ancient tapestries were wrought with the needle. Close examination at once proves that they were woven in a loom, and a moment's thought will bring the conviction that no amount of time and industry could suffice for the stitch-for-stitch creation of even such specimens as have come down to us.

At the same time, it must be remembered that pictorial embroidery resembling tapestry was once in favour, and at a hasty glance may be mistaken for it, but the slight irregularities inseparable from hand-wrought productions and various technical differences render its true origin quickly recognizable.

In addition to these multi-coloured pictures of a past age, there are others wrought in outline and imitative of engravings. Setting aside the questionable taste shown in them—for it is a rule that the works of any one branch of art should not be imitated in another,—due credit must be given to the industry which produced them. The best of these needlework pictures were done upon a white background, usually of silk, and with the finest black, brown, or red silk working-threads. The entire work was carried out in exceedingly minute backstitches, and at a little distance the lines were not distinguishable from those made with a pen.

The example here given (fig. 432) reproduces a typical piece of English 18th-century work (such as was referred to above) now in the Victoria

and Albert Museum. The background is of cream-coloured linen, first covered with an elaborate scroll-pattern in backstitch with fine cream silk, and then sprinkled with sprays of flowers worked in brighter silks. The colour of these blossoms is yellow, shading to orange; the leaves, which are also shaded, are worked in green and yellow silks. The general effect is most pleasing, and a worker desiring to adapt the scheme to some present-day use could rearrange the designing both of the groundwork and of the sprays to suit her own taste and purpose.

As a specimen of modern work the screen shown in fig. 433 is characteristic. It was worked under the superintendence of the Royal School of Art Needlework, Exhibition Road, from a design by Walter Crane. The four panels form one picture illustrative of the fable of "The Vain Jackdaw".

The whole is embroidered in crewels in natural colours, most judiciously blended. The plumage of the birds is wonderfully well represented, the scattered feathers especially being treated with a delicacy and patience from which over-hasty amateurs might take a hint. The background is a tawny-coloured waste-silk fabric. The waves and fishes at the base of the panels should be noticed, as they add quaintness to the work, and, as far as the design is concerned, "balance" the upper portions of the screen.

This fish-and-wave detail somewhat suggests the Japanese drawings that have been adapted to modern embroideries with happy results. They frequently represent natural objects slightly conventionalized in the particular manner that, for want of a more accurate word, can only be called Japanese.

The style is one easily imitated, but the work of good native artists cannot be equalled by English draughtsmen. It is advisable, therefore, not merely to work from a genuine Japanese design, but from a piece of finished embroidery, in order that the spirit and execution of the work may be in keeping.

Leek Embroidery.—Tussur silk, as a background for embroidery, was first brought into prominence by Sir Thomas Wardle through the Leek Embroidery Society, which concerns itself with the weaving and dyeing of woollen cloth, brocade, Tussur silk, plush, velveteens, and many silken threads and accessories for embroidery. The silk is the produce not of the cultivated, but of the wild, silk-worm of India, and the employment of it has opened up an important trade in what was formerly a neglected material.

The branch of this British industry (for the mills and dye-works are located in Leek) with which fancy-workers are concerned is the actual embroidery as prepared for the public. The border or table-centre reproduced at fig. 434 is a typical specimen of the style or patterns sent out by the society. It is designed by Mr. Gilbert Scott, junior, printed upon pale dull-green velveteen, and embroidered wholly in the Tussur silks. The highly conventional flowers are in delicate tones of blue,



Fig. 432. English Eighteenth-century Crewel work (Victoria and Albert Museum).



Fig. 433. —Embroidered Screen. (From a design by Walter Crane.)

pink, and brown; white and cream being also introduced into them. The sections of the design are outlined with Chinese gold thread.

One peculiarity of Leek embroidery is that the foundation materials are manufactured with the pattern printed upon them, and as many of our best-known designers are responsible for them, they are naturally appropriate and pleasing. It should also be noted that the entire space within the outlines is covered with stitches, the foundation appearing merely as a

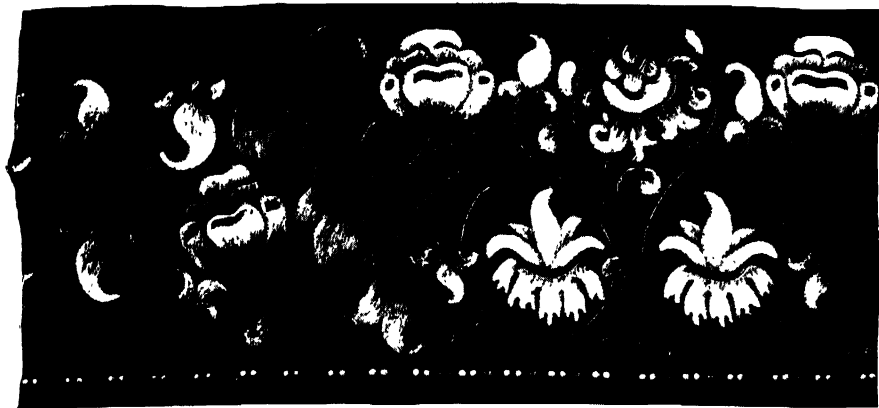


Fig. 434.- Border or Table-centre on Tussur Silk (Leek Embroidery Society).

background, and never in the centre of the design. The stitch used is that sometimes adapted to outlining, and known by that name. When employed, as here, as a filling, it is more correctly called by its ancient name of *opus plumarium*, or feather-stitch. The term crewel-stitch has also been applied to it; this is only a modern appellation.

DRAWN-THREAD WORK AND TENERIFFE EMBROIDERY.

Drawn thread or *punto tirato* is one of the oldest forms of embroidery. It consists in carefully drawing out a number of threads in linen and embroidering over these in a design that not only embellishes but strengthens them. This kind of embroidery can be applied to all sorts of linen materials, whether coarse or fine, from bath towels to cambric handkerchiefs. Linen of a very even weave should be chosen for this work. Teneriffe work is similar, but the designs are very loose and open.

Examples of Drawn Thread.—In the plate facing next page the drawn-work knot is illustrated (*a*). In hemstitching or side-clustering each knot is secured by a stitch made into the side of the open band. At *b* is shown a drawn band caught into sets of four by knotting down the centre. Some of the strands are clustered and others free, while others are worked over with three threads and subdivided to form a pattern.

At *c* and *d* are bands of double and of single crossing. The edges of the strands can be clustered or not as desired. In single crossing one set of strands is lifted with the needle over the set immediately above it. Double crossing is accomplished thus:—

Bring the working thread up to the right side under the first three clusters, back over the third cluster and under the first and second, over the first and under the second, over the third, under the fourth, back over the fourth and third, under the second and down again under the next

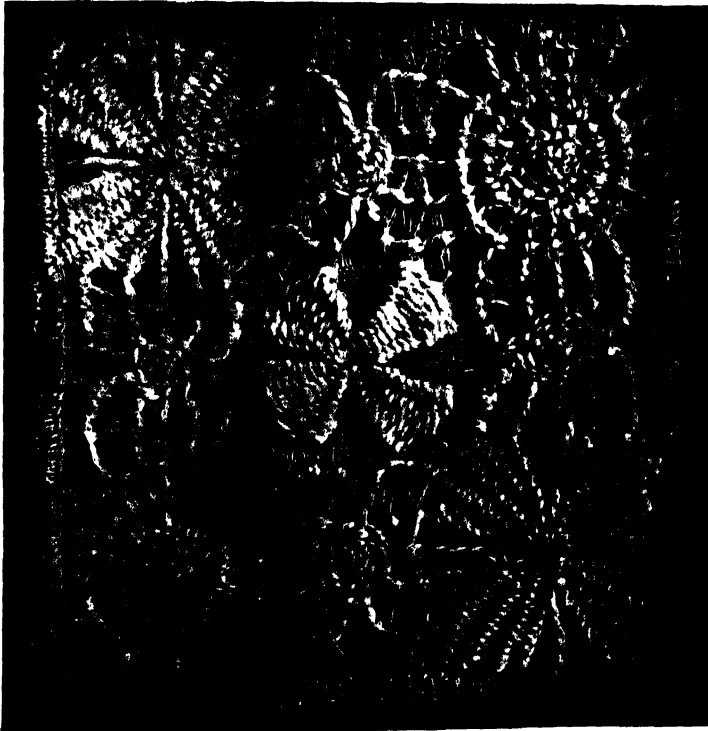


Fig. 435.—Spanish Drawn-thread work (from the *Peri-lusta Handbook*, by kind permission).

three, and repeat. At *e* is hemstitching worked in knot-stitch. The corner space enclosed in black lines is to be cut away in all layers save the underneath one, to prevent the thickening of the corner. The other hem, when folded along the black line, is to be stitched similarly to the loose strands; lastly, the corner should be hemmed along both sides, the stitches being here taken through a double set of loose strands. At *f* and *g* are shown two ways of filling the spaces which occur at the corners where strands have been withdrawn in two directions forming a right angle.

In one wheel threads are thrown across in seven directions, and with the eighth thread these are knotted together in the centre and worked over

with darning, overcasting, and single knots. In the other wheel the threads are differently arranged and worked over in darning.

Designs for Drawn Thread.—Spanish drawn-thread work is illustrated in fig. 435. Draw the linen, leaving equal solid and open squares. Button-hole all raw edges. Start a thread from centre of open square corner, carry across, and knot in two equal parts the loose strands; pass across next open square, and continue as before through the whole of pattern. Start second thread, carry across open square, knot each division of strands near the

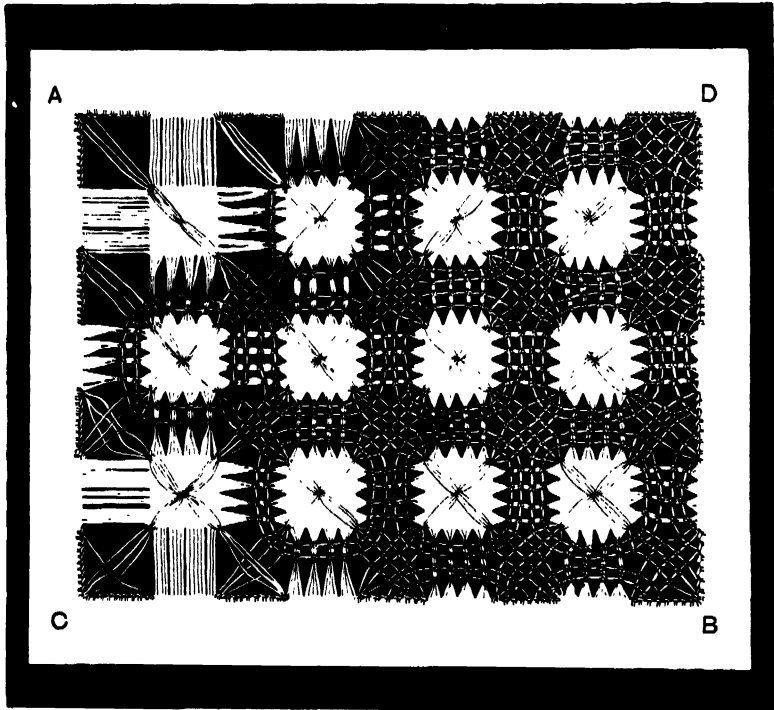
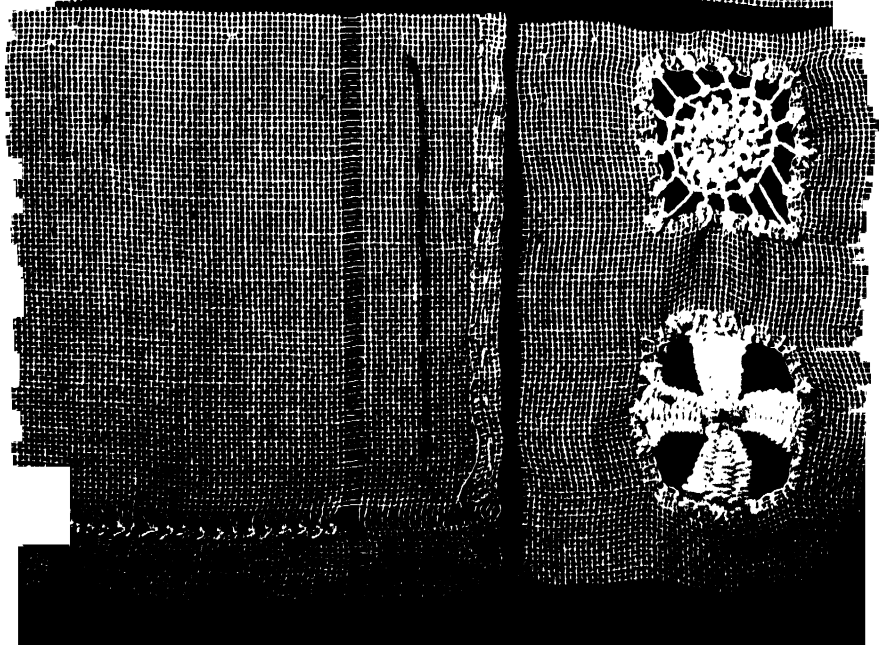
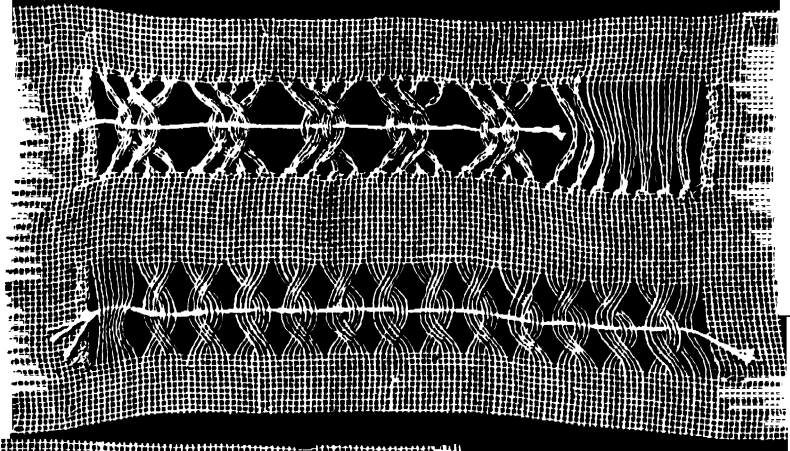
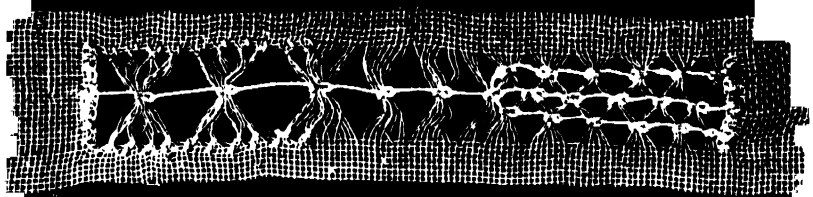
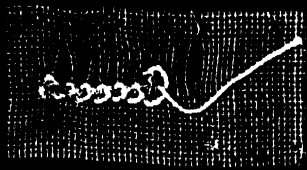


Fig. 436. Drawn-thread work Design.

centre into two parts, cross next open square, and continue thus. Start three threads (equal distance from one another, this must be along the solid border of corner square), and this time knot the strands into three parts each, passing the threads thus made between the loose strands, knot them together and form the little round "spider" by darning in and out of the threads; then pass on to the next strands, to the open square, and repeat again. The threads in the open squares are drawn together and knotted with the last thread which has knotted the strands into three. The spider-web and darning design can be easily followed from the pattern given.

Fig. 436 is a handsome design, to execute which the whole surface to be embroidered should be divided into squares by alternately drawing and leaving sixteen strands both across and down the linen. The first working



thread is started with a drawn-work knot at A, whence it is brought across diagonally to B in this manner:¹—Starting at A *, make a single chain stitch into the corner of the nearest solid square; pass the needle down to the wrong side of the work through the exact centre of this square, and up again to the right side in the next open square; again put the needle through the centre hole in the linen square from the right to wrong side of the work and up through the open square below; pass the needle from right to left through the bottom part of the lower of the two diagonal stitches; carry the thread downwards, still in the same direction, and repeat from * to the end of the line at B. Next bring two more lines of stitching down, one on each side of this first one, always making a small chain-stitch at the top of each solid square and passing the needle through and through the centre of it in the same hole. Work these sets of three diagonal lines across all the open squares, and all in the same direction.

Then work similar sets of stitchery across the linen in the opposite direction from C to D, interknitting each thread with those already set, thus:—Join the thread at C *, knot it in with the first, second, and third of the other diagonal working threads, leaving an equal distance (about one-sixteenth of an inch, supposing each square to measure nearly half an inch) between the knots; make a chain-stitch into the nearest corner of the next linen square, pierce it through the centre with the needle from the right to the wrong side of it, and bring up the thread in the open square below; again put the needle down through the square and up again below it, pass the needle from right to left through the bottom part of the lower diagonal stitch, and repeat from the last * to the end of the line at D. Bring two more threads down, one on each side of this last one, and interknotted in the same manner with the first set of diagonal lines.

For the next stage of the pattern begin on the wrong side of one of the linen squares, near a corner; bring the thread out on the right side of the work one-sixteenth of an inch along a half-open square and parallel with the threads of it; * knot together a cluster (four threads) one-sixteenth of an inch distant from the linen square, and make three more knots the same distance apart from each other, binding together a cluster of the half-drawn threads.

Make three more equally-spaced knots, each of which must tie in one of the diagonal working-threads nearest the worker.

Carry on the thread to the next half-drawn square, and repeat from the last * three times until the linen square started from is encircled with a trail of thread knotted at regular intervals. Close the circle by knotting again round the first cluster. Carry the working-thread again one-sixteenth of an inch away from the central linen square and parallel with the half-drawn threads, then repeat again from the last * but one, but put the knots slightly farther apart and one-eighth of an inch instead of one-sixteenth of an inch distant from the linen square. The

¹ The * here means that the following stitches have to be repeated.

result will be a second outer circle round the same linen square. Close the circle by knotting again into the first cluster, run the working-thread back to the nearest linen square in and out one of the working lines leading to it, and so as to be as little noticeable as possible, and there fasten it off. Each linen square should be surrounded in the manner described, and along the edges of the work half-circles of knotting should be put in. These will present no difficulty when once an entire round has been completed.

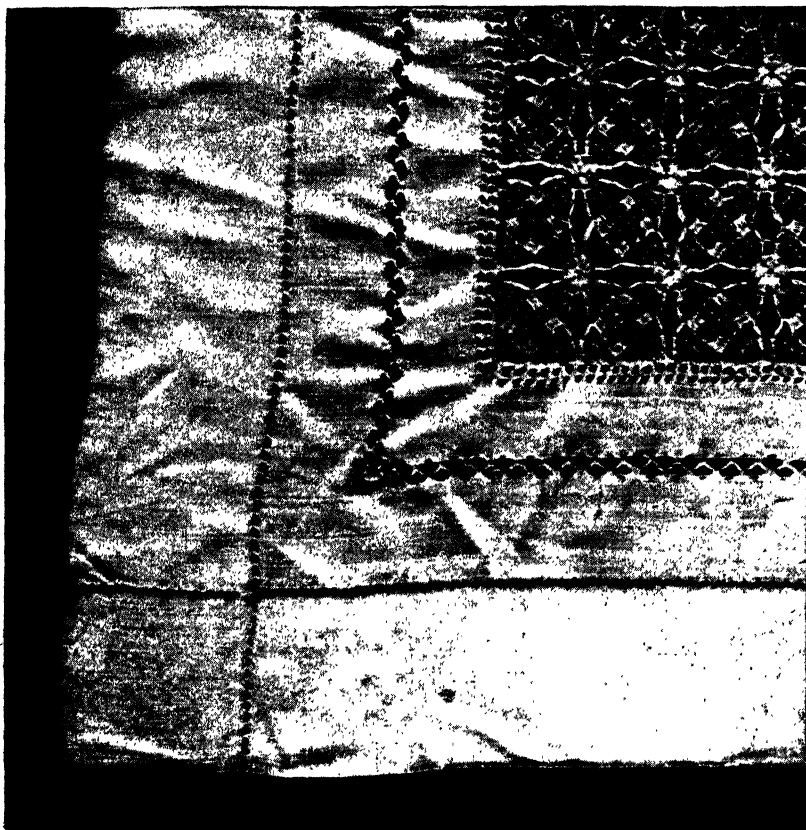


Fig. 437.—Corner of D'Oyley (Calado drawn-thread work).

The d'oyley next shown (fig. 437) is a specimen of the Calado drawn-thread work imported by Messrs. Liberty & Co., Ltd., Regent Street, London. The pattern is prepared by drawing squares as in the last example of drawn work, but in this instance twice as many threads are removed as are left each way. As in fig. 433, diagonal threads cross all the squares in two directions, and they are interknotted in the open spaces, and form long diagonal stitches in the solid squares, exactly as was described with reference to fig. 436. There is, however, this difference, that but one circle of knotted thread is brought round the solid squares,

while the loose strands in the half-open sections are clustered into pairs, not in sets of four. Further, the diagonal working-threads are surrounded in the open squares by a square frame formed by knotting a strand into each of three threads in turn and into the centres of the clusters of the half-drawn squares. Each corner of this framework is filled in with *point de reprise*. The drawn-work is finished off with a band of minute stitchery, such as was shown on the silk sachet. Beyond this is a space of linen intersected by a line of simple work formed by drawing out eight threads and clustering the loose strands into vandykes.

To make these vandykes the first four strands after a corner should be whipped round with two or three overcast stitches, then joined at the extreme edge with a knot to the next four loose strands; this last set is similarly oversewn, but working in the reverse direction, and is then caught near the opposite edge to the succeeding four threads, and so the work proceeds till all are included.

In the open space at each corner is a tiny wheel of overcasting, and the whole d'oyley is finally edged with hemstitching.

The uses of drawn-thread work scarcely need enumeration. It is applied to house, bed, and table linen, to underclothing, blouses, children's dresses and smocks, and in its finest varieties upon cambric or lawn, to handkerchiefs and chalice veils.

WHITE WORK.

Under the somewhat vague name of white work are included various embroideries executed upon linen and cotton textiles with flax and cotton threads. They are usually a combination of thick raised stitchery (satin-stitch and button-holing) with open-work and fancy stitches. Drawn-thread work is sometimes, but not necessarily, included; being a branch distinct in itself, this has been treated of separately. White work is frequently met with in the form of narrow trimmings for underlinen, though in England machine-made edgings have largely taken their place for everyday purposes. Bed and table linen, toilet-cloths, table-runners, and tea-cloths are often embroidered, as are certain articles of dress, such as blouses, handkerchiefs, cuffs and collars, and trimmings and flounces of various depths.

Occasionally the open spaces in a design are backed with net, which forms a pretty filling more easily and quickly inserted than lace wheels and bars worked with the needle. The finest net is employed for handkerchiefs, d'oyleys, and veils, and a proportionately coarser meshed material for pillow-slips and such larger articles. Another favourite material for use in white work is lace-braid. There are many patterns in this, and some of the more fanciful ones are specially useful for intermixing with the hand-work. If they are skilfully and neatly inserted, the effect is satisfactory.

The braid should be firmly sewn down along the edges, so that the opaque material below it may be cut away, thus avoiding a double fabric and heightening the illusion that these appliqués are themselves embroidery.

White Work Stitches.—Fig. 438 illustrates the stitches principally employed in white work, but it must be understood that the specimen is intended merely as a sampler introducing as many varieties as possible in

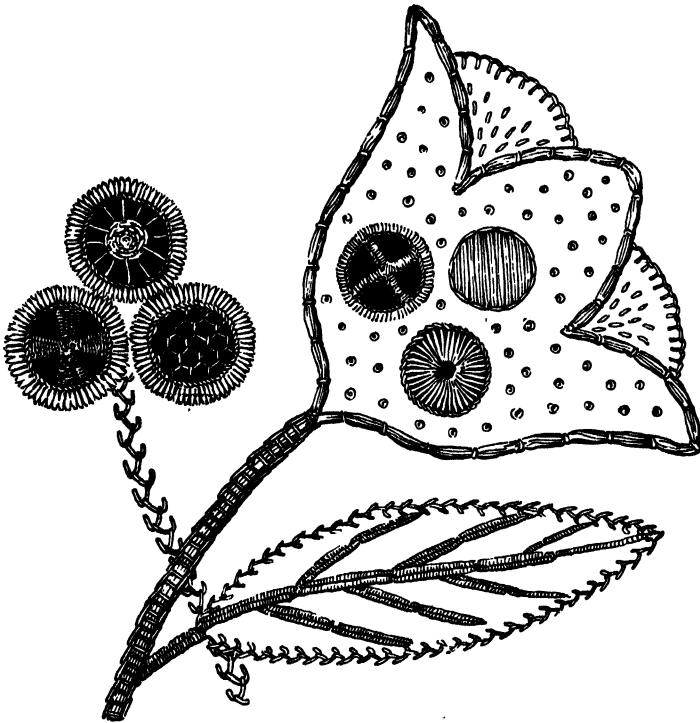


Fig. 438.—Sampler, showing white-work stitches.

a small space. In the actual embroidery two or three kinds of stitches would be quite sufficient in a spray of this size. A beginning is made with the main stem, which is worked in a kind of couching. Several strands of thread are laid along it and caught down by a double row of button-holing, a line of these stitches being carried up first one and then the other side of the stem, those on the one side alternating with those on the other, and each stitch being made so as to include within it all the threads to be couched.

The stem on the right side and also the centre and veins of the leaf-like form which terminates it are worked in *point de reprise*. For this

long stitches are made with an even number of strands of cotton and are covered with darning. The working-thread passes alternately over and under half the strands laid down, each time going under the set that was passed over previously.

The leaf is outlined in an Oriental stitch resembling herring-boning, except that on the inner side of the band the needle always passes horizontally, instead of vertically, through the linen.

The stem to the left in the diagram is worked in feather or coral stitch, and ends in circles surrounded with raised button-holing, and, for the sake of example, each filled in in a different manner. When the linen inside the button-holed rim had been cut out, the top circle was filled in with a lace wheel. Five strands of thread pass completely over the ring, and a sixth is brought half-way across, and in the centre unites the other threads with a drawn-work knot. There is now a sort of wheel with eleven spokes, and the threaded needle passes round and round alternately over and under a strand until a solid centre is formed. A stitch is then made in the outer row of this round, and the thread is taken across to the edge of it (thus forming the twelfth spoke) and there fastened off.

In the left-hand space darning is again seen, but in a different form. Eight threads are brought over in two directions, and are united in the centre with a knot, thus making sixteen short lines. Each set of four is darned over, two threads being alternately covered and missed, and the stitches are put slackly at the edges and drawn more tightly in the middle so as to form four sloping arms or rays.

The remaining open circle is filled in with open button-holing. This in no way differs from the ordinary form, excepting that it is worked very loosely in rows secured into the fabric at the beginning and end of each line. Each stitch is made into the one above except in the first and last rows, where the stitches are worked into the stuff, thus stretching and holding the network in place.

The large shape at the top of the design is outlined in simple couching, the upper parts of it with spaced button-holing. In this variety the stitches are placed about one-eighth of an inch apart. There are also three circles here, and as many different ways of working them. The open one is button-holed round and filled in with button-hole bars made over threads taken across in two directions and joined in the centre. In the round below button-holing appears again. In this instance the stitches all start from an eyelet-hole made in the middle of the circle. In the third round is raised satin-stitch outlined with back-stitch. French knots and dot or seed stitches sprinkled over the background serve as a filling in the lower and upper sections of this detail respectively.

Linen and cotton articles embroidered in white work are finished off by hemstitching, or with an edging of lace, handsome crochet, or frills of the fabric. Sometimes a simple button-holed edge proves the most appropriate finish, harmonizing with those details of the design which are in thick work—overcasting, satin-stitch, and button-holing.

Designs.—The tea-cloth illustrated in fig. 439 is a typical specimen of modern white work, and displays several of the stitches previously described. The sprays in the corners are worked in raised satin-stitch, outlining, and dot-stitch. The edges of the cut portions are finely button-holed, and the spaces are bridged over with flying lace bars and circles of button-holing. Lines of drawn-thread clusters edge the cloth, and beyond



Fig. 439.—White work: Corner of Tea-cloth.

their limit are small sprays bounded finally with button-holing in vandykes, the material beyond being cut away.

Monograms.—An embroidered monogram is the most practical way of marking personal possessions, especially linen which has to be submitted to the chemical caprices of the laundress. Very good designs for single initials or monograms may be obtained and transferred, traced, or copied; and the good "haus-frau" will have an added pride in her linen-closet when she knows that every sheet and towel and pillow-slip is neatly embroidered with her or her husband's monogram. For personal linen this method is even more advisable.

CANVAS WORK.

Many kinds of canvas are used for fancy work, namely, single-thread, Penelope, Java, honeycomb, Congress, &c.

Single-Thread Canvas.—This is procurable in many sizes. The finer are of silk, fit for working with delicate threads and in small sections; other makes increase in coarseness through many grades to the cheaper white or brown kinds suited for rugs and large undertakings. These, when embroidered, are not allowed to show, but are entirely covered with stitchery.

The stitches used in canvas work are many; indeed almost any can be employed, but those that prove on trial to be the most effective should be given the preference.

Canvas-Work Stitches.—In the sampler on the accompanying plate various canvas-work stitches are shown. Cross-stitches are omitted as being considered and figured elsewhere. Beginning at the left-hand top corner at *a*, there is a row of upright stitches, their chief use being to separate the sections of a design, or to serve wherever a plain straight band of stitchery is desired. These and other stitches here given can be taken over few or many threads of the canvas, according to the size which it is required that they should be.

These straight stitches can be made in vertical as well as in horizontal lines, and at *b* are illustrated the two varieties used together to make small square blocks. Beginning at the top of one of them, the working-thread passes over twelve strands of the canvas, the stitch next below over ten, and so on, decreasing in equal proportion till but two threads are enclosed; then in reverse order, still downwards, increasing until the original number is reached. The side arms of the square are worked similarly, but with upright stitches.

At *c* and *d* are shown slanting stitches sloped in two directions. The first stitch is made by counting an equal number of canvas strands up towards the side desired, and inserting the needle in the hole thus arrived at. Each succeeding stitch being put into the spaces immediately next to those filled by the one before it, a perfectly even band is the result.

At *e* is shown a more fanciful stitch. Three upright stitches like those at *a* are first made over any even number of strands, then two threads of the canvas are passed over and three more stitches made, and so on all along. The little groups of three are then each caught in with a horizontal stitch taken over the exact centre and passing through the middle holes in the space between the sets of stitches.

At *f* is another pattern worked with upright stitches. Each stitch is taken over from four to eight or more threads of the background, and stitches are made each one strand above the other until the top of the vandyke is at the height required, when it is lowered in a similar manner. Succeeding rows are worked closely one below the other, the upper part of

each stitch being set into the same hole as that through which the bottom part of the stitch immediately above is taken.

The details *g* and *h* display two other ways of varying straight stitches by making them into stars and crosses. The rays of the stars are worked somewhat as were the vandykes at *f*; the upright and horizontal stitches meet in the angle and pass through the same set of holes in the canvas, and two strands of the material are left between each pair of rays. In the centre of the design is a leviathan or double-cross stitch.

The cross (*h*) is made like the shape at *b*, but when the square centre is completed, four arms are added by working beyond each stitch first three more stitches of equal size to the last and widest, and then stitches taken over two fewer threads of the material each time, until the arms end with a small stitch over two strands only.

At *i* may be noted a pattern in back-stitches, some straight, some slanting. Apparently elaborate, it is really merely an arrangement of details *a*, *c*, and *d*, and in developing it care must be exercised in counting the strands of the canvas so as to ensure accuracy.

This is but a small example of the many designs which can be made in this kind of back-stitching. Sometimes whole pieces of work are embroidered in elaborate designs with such tracery of straight and sloping stitches of equal lengths, and at other times similar devices are more sparingly used to lighten the effect of work in which the principal features are carried out more solidly and heavily.

Darning is easily executed on canvas owing to the facility with which the threads can be counted. At *j* is a very ordinary variety of the stitch, taken over an uneven number of strands that the picked-up threads of each row may always be exactly in the centre of the long stitches of the adjacent line.

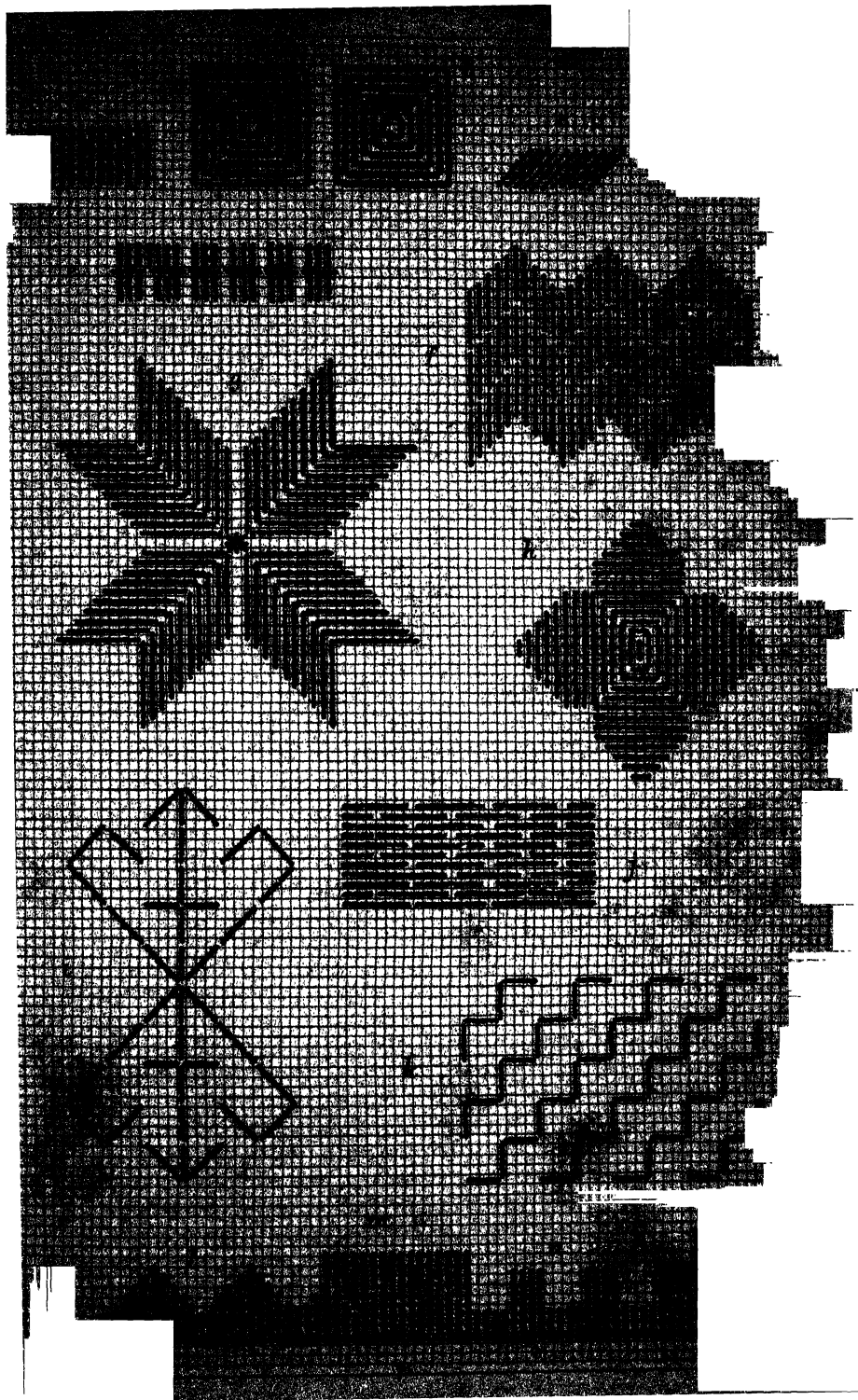
At *k* is illustrated a little zigzag pattern made by diagonal lines of upright and horizontal stitches, and useful as a powdering or filling inside an outlining of more formal work.

Edging Canvas Work.—Before leaving the sampler, attention should be paid to the border, where four ways are given of working over, and so finishing off, the cut edges of canvas work. Button-holing in vandykes is shown at *l*, and at *m* smaller vandykes met from above by a second row of stitches contrived to dove-tail with them exactly.

At *n* are four short and four long stitches alternately; at *o* are similar stitches met like those of the vandyke by another set fitting in with them and making an even band. These stitches can all be used, if preferred, without button-holing, but are then less even and less secure.

An infinite number of varieties can be contrived by a study of these stitches, the size and slope and arrangement of which can be altered according to the requirements of the work. As a rule a stitch should not pass over fewer than two, or more than twelve, strands; otherwise, in the first case, it will not be apparent, and in the second, it will be apt to sag.

Specimen of Canvas Work.—A finished sample of canvas work is



illustrated in fig. 440. The whole of the centre of the cloth is divided into small squares by stitches taken in two directions over four strands of the fabric. This is bounded by an outline of back-stitch in coloured silk, and then by a wider band formed of six rows of long and short stitches so fitted in as to leave small oblong spaces at regular distances apart. These bands are stopped at the corners to leave room for a star similar to, but smaller

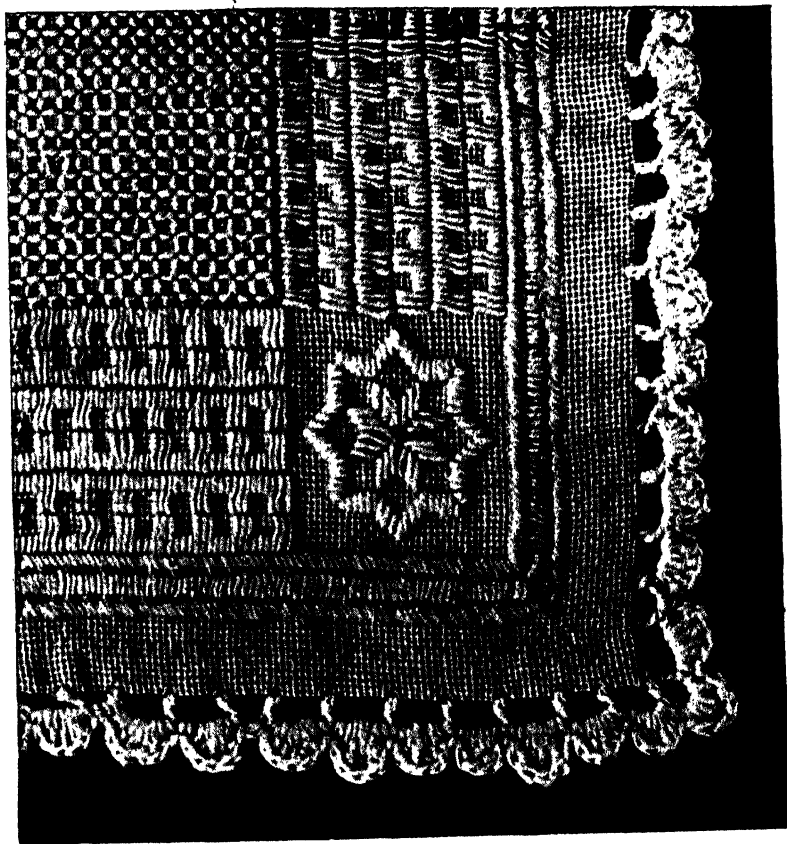


Fig. 440.—Corner of Canvas D'Oyley.

than, that at *g* in the plate, and set in an eight-pointed frame of stitching. Beyond this, again, is a triple band of stitches intersected with coloured silk; the centre line is of straight, and the two outer rows are of sloped, stitches. Stars in silk fill up sundry spaces in the work, and scallops in crochet finally edge it.

Varieties of Canvas Work.—Ivory work, carried out in the stitches just detailed, and so called because of the colours of the canvas and working-threads, will always be popular owing to its effectiveness and facility of execution. Recently similar embroidery has been much done with coloured cottons, and this is often outlined and enriched with

fillings of more elaborate stitches than were formerly employed in the work.

Point Hongroise is another kind of work on canvas that enjoys great popularity. It is worked in several shades of a few colours delicately blended and arranged in irregular rows of vandykes. In the finer silken makes these lines of straight stitches are separated by a narrow band of work in gold passing, exactly following the waves of the larger stitches; in coarser specimens this boundary line is usually of black silk or wool.

Canvas slippers are often worked in wools and silks, and have the advantage of wearing well. The patterns nowadays supplied for them are excellent and effective, the best being geometric in character.

Canvas is well known as a foundation for drawn-thread work.

In another kind of embroidery all the strands are left uncut, but are twined by the aid of stout flax threads in various directions, so as to produce elaborate open-work designs.

Penelope Canvas.—Penelope canvas, in white and colours, has a double thread running in both directions, and among many uses is employed, when coarse, for making rugs.

Java Canvas.—Good-quality Java canvas is woven in larger squares in colours and worked in many ways; when the material is woollen, it is allowed to show and form part of the design. Another idea is to embroider upon it in tapestry wools a pattern arranged wholly in squares, which are formed of four consecutive stitches of wool, each taken over four different strands of the canvas. So worked, the canvas is used for a piano-back, sofa-rug, or settle-cover.

Honeycomb Canvas.—This is named after the design of the weaving, which explains itself.

Congress Canvas.—This is a fine kind of crash very evenly woven, and therefore suitable for all kinds of embroideries.

CROSS-STITCH.

Cross-stitch is a form of embroidery always popular owing to the facility with which effective patterns can be worked in it. The old-fashioned form of it is worked on Penelope canvas. The more up-to-date designs come to us from Russia, and are worked on crash, or linen canvas, in ingrain red, blue, and white. Silks, coloured cottons, or flax threads are used for the embroidery, according to the purpose it is to serve.

It is often applied to articles of children's dress, being as durable as it is ornamental. Washing suits for adult wearers are also trimmed in the same way, the vest designs being alike on both sides. A mixture of ingrain red and blue is very effective, and sometimes a little black is added. This last has, however, the disadvantage of being apt to turn grey with washing.

Any article required to be often washed should be worked with ingrain threads. There is a wider range in them now than formerly, but scarlet is still the most, and blue the least, reliable tint. Naturally much depends upon the care taken in washing coloured goods. Frequently directions are furnished with each skein of thread, and if they are carefully followed the risk of spoiling the work is greatly lessened.

Kinds of Cross-Stitch.—The most usual form of cross-stitch is that shown at *a*, *b*, and *c* in the plate. A stitch is first made in a diagonal direction, and then crossed by an exactly opposite thread, the result being as at *c*. It is unimportant in which direction the first half of the stitch is made, but it should be uniform throughout the work. On coarse material one strand only is traversed in each direction, but on finer canvas, such as that upon which this sampler is worked, four or even more threads are covered by the stitch.

Leviathan cross-stitch is shown at *d*. A cross such as that at *c* is first made, and then doubled by a second pair of stitches, one horizontal and the other vertical. At least two threads of the material must be covered to afford space for the straight stitches.

At *e* is another kind of cross-stitch formed by four diagonal stitches of equal span, and starting from the same central hole.

Four straight stitches form the crosses at *f*, and at *g* is a double stitch formed by *e* and *f* combined. This resembles a leviathan stitch, but all the parts start from the centre, none really crossing another. The detail at *h* is rather more elaborate, being composed of a simple cross-stitch (*c*), each arm of which is again crossed by another diagonal stitch of one-half its length. A somewhat similar effect is produced by a square of four simple cross-stitches, but in *h* the needle is only returned to the reverse side of the work at the edges of the stitch, and a more raised and less broken-up appearance is produced.

Such crosses as those at *i* are useful for a filling, or can be arranged to form various designs.

Four of them sloping in opposite directions from one centre are shown at *j*.

It will be noticed how closely cross-stitch resembles canvas embroidery, into which indeed the more fanciful varieties of it merge.

Cross-Stitch Designs.—Any pattern that can be carried out in straight lines can be embroidered in cross-stitch. Sometimes the designs are placed at intervals upon the background as a powdering, but frequently, whether as border or centre ornamentation, they cover the material more closely.

In one very effective variety of the work the usual positions of grounding and embroidery are reversed, and while the pattern is left in the exposed squares of the canvas, the entire material beyond these details is covered with stitchery throwing them into relief. Some designs are more suited than others to this method of treatment, heraldic and geometric ones especially.

Uses of Cross-Stitch.—Cross-stitch is applied to many articles for the house—table-runners, duchesse-covers, pillow shams, sideboard-cloths, and so

on, as well as for such trifles as night-dress sachets, reticules, d'oyleys, or pin-cushion tops. It serves as a good trimming for dresses, especially for those made of washing materials or some plain make of serge that may suggest a peasant costume, and also for children's clothes.

Aprons in imitation of Russian peasant work can be made in cross-stitch. The foundation of these is linen or cotton, one or more strips of white, blue, and yellow joined horizontally being often used together according

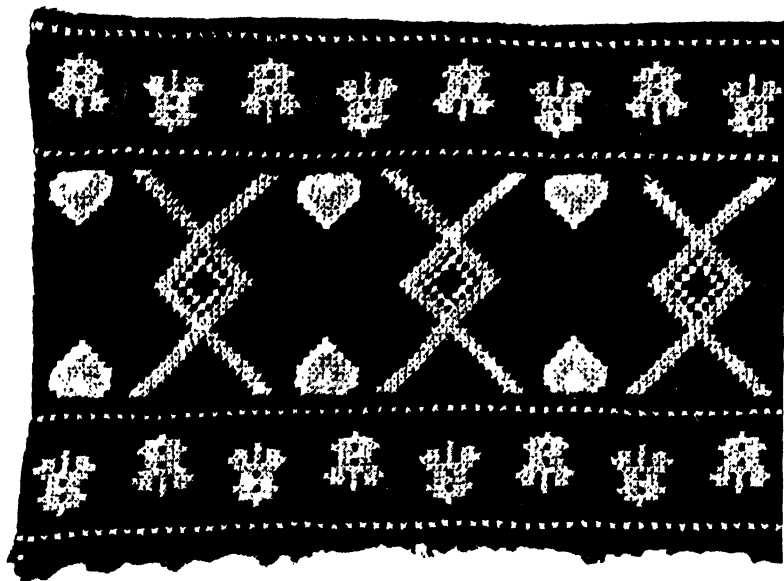


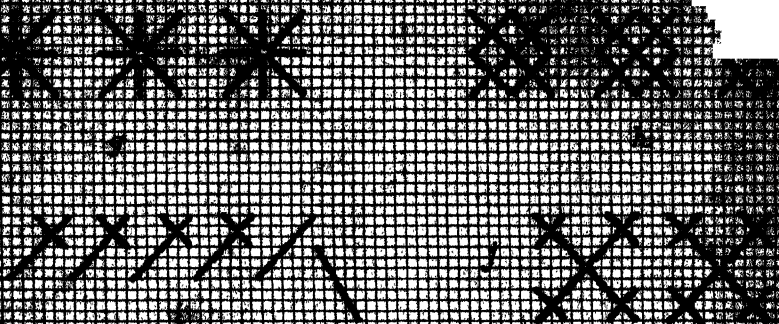
Fig. 441.—Cross-stitch Design worked on dark-blue Linen.

to the depth that the skirt and bib of the apron are required to be. Each of these strips should have single-thread canvas laid over it, and the work can be executed through both materials. It should be drawn rather tightly, as the canvas has afterwards to be pulled away strand by strand. A working detail of this cross-stitch is illustrated on the plate, where the embroidery is shown in progress.

Fig. 441 shows a portion of a completed strip suitable for an apron or for many other purposes. It is of dark-blue material worked in scarlet, pale-blue, bright-yellow, and white threads. The bright and somewhat barbaric range of colouring is appropriate to the style of the work.

As a finish to embroidery of this kind a special make of cotton lace and insertion is procurable in white, blue, and red, woven separately or together, and occasionally mixed with tinsel. On cream or white work, torchon lace looks well.

Many other articles on woollen and other textiles can be worked in cross-stitch, executed as already described over canvas; and background, threads, and such accessories as lace and fringe must be chosen in colourings and materials suited to the proposed use.



VARIETIES OF CROSS-STITCH.

THE following are some of the most popular and useful patterns for cross-stitching. They are arranged in a grid, with each pattern occupying a square space. The patterns are designed to be simple and easy to follow, making them suitable for beginners and experienced stitchers alike. The patterns include a variety of geometric shapes, such as stars, crosses, and lines, which can be used to create a wide range of designs. The patterns are also arranged in a way that allows them to be easily compared and contrasted, making it easier to choose the one that best suits your needs. The patterns are presented in a clear and concise manner, with each pattern accompanied by a brief description of its design and a list of the materials and tools required to create it. This makes it easy for you to get started with cross-stitching and to create beautiful designs for your home or for sale.

A use of cross-stitch somewhat rarely seen now is as a mark for linen. The samplers executed by a former generation remain as monuments of industry in this direction, and for those who have sufficient eyesight and patience there is still no more lasting or effectual mark than a letter or name picked out in tiny cross-stitches in ingrain cotton. The stitches are made directly into the fabric, not by the aid of canvas stretched over it.

Russian Cross-Stitch.—Russian cross-stitch has been already mentioned. A feature of some kinds of the work is that the design is marked out in squares upon a special make of linen, each square to be covered with one crossed stitch. This preparation saves much trouble to those unable to transfer their own designs to the material before them.

APPLIQUÉ.

Appliqué is one of the most ancient forms of needle-work. It may be executed in two ways. In one form, which is known as onlaid appliqué, sections cut from one fabric are sewn upon a foundation of another and secured in place with various fancy stitches, which serve also to conceal the raw edges and to prevent fraying. In the second form, known as inlaid appliqué, the portions forming the design are cut out from the foundation fabric and their places are filled with exactly similar sections of some other material.

Materials for Appliqué.—Appliqué is often executed with rich materials. Plush, velvet, or serge makes an excellent foundation for ornaments cut from silk; velvet is sometimes laid on a serge ground.

Cottons and linens are also used for appliqué with good results. As a general rule it is not considered in correct taste to mix two classes of fabrics, such as woollen with linen, or cotton with silken material.

A figured fabric (brocade or cretonne, for instance, according to the quality of the work) is sometimes chosen, and on this the appliqués are, as it were, already designed, requiring merely to be cut out and sewn down upon some other background either in the relative positions which they originally occupied or according to a different scheme of arrangement.

Appliqué may vary from a simple combination of two materials to elaborate work composed of segments of variously-coloured fabrics, connected and enriched with silk stitchery, tinsel, and similar additions.

As a rule, a bolder and more handsome effect is obtainable by using few rather than many materials, but as appliqué serves many purposes, it is obvious that on a book-cover, for example, greater variety and intricacy both of design and of workmanship is allowable than would be appropriate on a sofa-rug or portière.

Onlaid Appliqué.—Fig. 442 shows onlaid appliqué, white silk or satin on dark éru canvas, and as the method of procedure is the same in large as in small pieces of work, it may be described in detail.

It is advisable that first of all the foundation material be stretched in a frame, and to ensure greater accuracy in the cutting, it is often an advantage to frame also the fabric from which the appliqués are to be cut.

When a suitable pattern has been chosen and perfected upon paper, it should be transferred in the usual manner to both materials. The positions for a pattern such as that of the lily here given must be accurately indicated on the canvas foundation, while on the linen the shapes may be

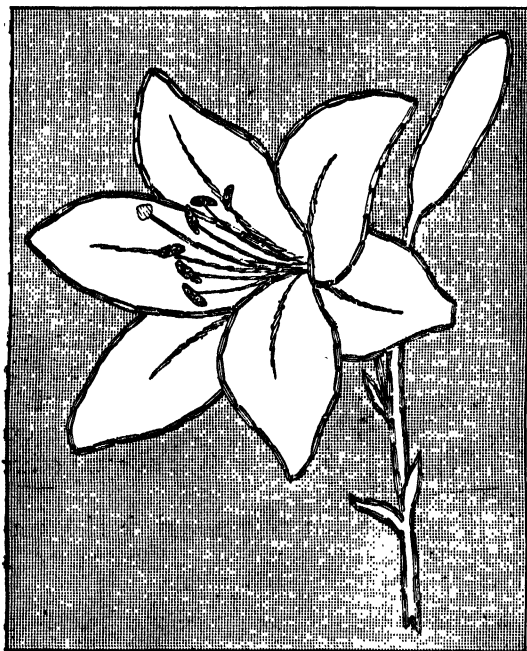


Fig. 442.—Lily in Onlaid Appliqué.

fitted as closely together as possible to prevent waste. Each section must be cut the same way of the stuff, that is, with the selvedge down.

For a simple pattern such as this a section of thin metal or a stout card of the shape required can be cut; the outlines are then easily marked by laying this model exactly in the right position on the materials and tracing round it with a pencil or chalk.

If the material from which appliqués are to be cut is very thin and likely to fray, it is advisable to smear the wrong side lightly with embroidery paste, care being taken not to let this stain the right side. When quite dry the shapes should be cut round with a sharp pair of scissors and laid

in position on the background. If paste has not been previously used for them, they may be lightly stuck down, but if it has, the appliqué should be tacked in position, the stitches being made in places whence they can afterwards be easily removed. All that remains to be done is to carry such a band round all the outlines of the work as shall fix it permanently and conceal the cut edges. The tacking threads can then be drawn out.

In fig. 442 couching is used as the surround, several strands of white silk being caught down with a finer strand of the same, and the central line of each petal is worked in outline stitch in white silk. The stamens, &c., are worked in natural colours, the stalk in pale-green silk.

Inlaid Appliqué.—The next two illustrations (figs. 443 and 444) show the other form of appliqué—inlaid work. This is so managed that by making two similar articles at the same time all waste of fabric is avoided, the sections cut from each being laid as an ornament upon the other. For inlaid appliqué the two materials (in the diagrams here given, very

pale apple-green satin and pale-mauve velvet) should be stretched each in a separate frame and over a lining of some soft material, through which the needle will easily pass. The pattern chosen is then marked in exactly the same position on both the velvet and the satin, and is cut out from each with sharp scissors (on no account must the lining be snipped); then the velvet section thus extracted is laid in the space made by removing the

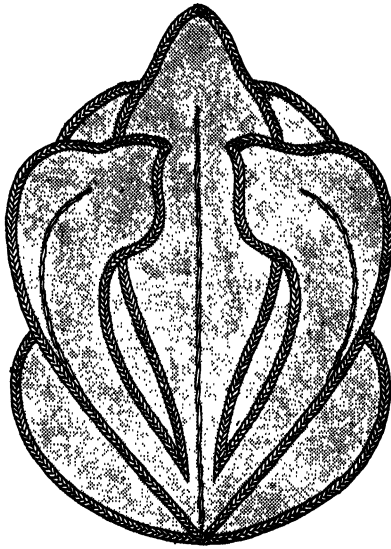


Fig. 443.—Inlaid Appliqué: Pale-mauve velvet on pale apple-green satin.

pattern from the satin and the satin shape in the corresponding opening in the velvet. If this is properly done each exactly fits the aperture prepared for it. Sometimes it is well not merely to paste the back of the fabrics before cutting them, but also to paste lightly or tack down to the lining, in addition to the appliqué, the cut edge of the fabric beyond it. In any case a somewhat wider outlining band is needed for inlaid than for onlaid appliqué, as there are two cut surfaces, instead of one, to be secured and concealed.

Couching was used in the first example of appliqué; white or gold braid is adopted here. There are many fine braids and gimps which can be employed for outlining, and various fancy stitches are also appropriate.

Button-holing, coral-stitch, and herring-boning may all be mentioned as suitable.

Specimen of Appliqué Work.—The last illustration (fig. 445) shows a completed piece of work. The design is conventional, and is worked in shaded silk on a canvas background.

Frequently in older samples of the work no embroidery is added on the

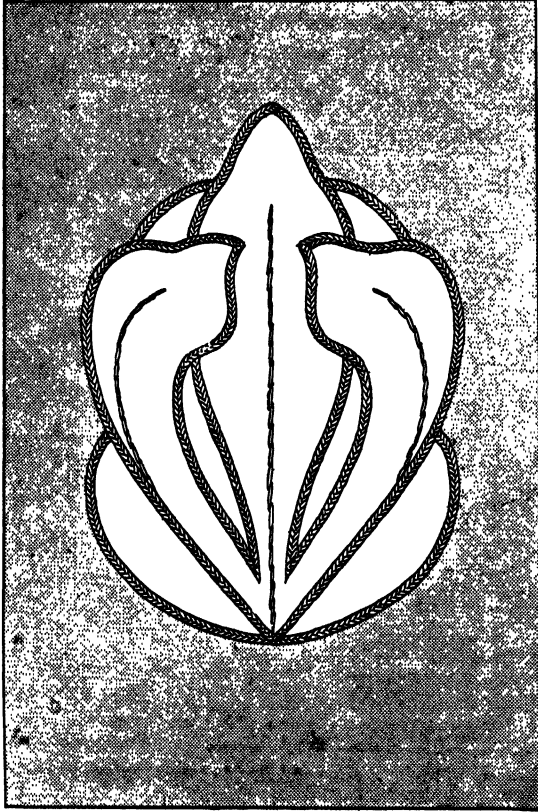


Fig. 444.—Inlaid Appliqué: Pale apple-green satin on mauve velvet.

appliqué, and the surrounding cord matches either pattern or background so exactly as to be hardly distinguishable from it.

Appliqué Designs.—The designs available for development in appliqué are many. The work is supposed to have originated from a study of wood inlaying, and it is well known what different patterns are used in that branch of art. Amateur workers will find considerable difficulty in doing figure subjects successfully, unless indeed they make use of those which are already embroidered or woven and apply them to the background selected.

Silk appliques, showing birds, flowers, &c., may be of great beauty, and merely need laying on a foundation and securing round the edges with stitches of silks, which should match and blend in with the woven ornaments.

Another form of ready-made appliqué is to be seen in the shapes in coarse white lace, or rather embroidery, meant for the decoration of white or coloured cotton or linen. There is much variety in them, some being merely ornaments, whilst initials of different sizes are also procurable and are exceedingly convenient for marking large or small articles.

These appliqués are intended to be oversewn round the edges to the background upon which they are to be put; the fabric beneath them being in some cases cut away; there then remains an open-work ornament neatly grafted in position.

Raised appliqué is a very ancient branch of the work. In this the pattern chosen—often of a naturalistic kind, as a bunch of large fruits, or perhaps a group of birds or of fishes—is duly traced on two textiles, and for the appliqué is backed with wadding laid over a lining. The forms thus padded are cut round as usual, placed on the foundation, and there sewn down.

Sometimes the required shapes, before being cut out and transferred, are entirely covered with gold thread or with stitchery laid evenly over wadding. Such raised pieces usually do not constitute the entire design, but merely the more prominent features of it, and require to be connected with embroidery in silks or gold thread. Such small additions as cannot well be padded and laid on are also put in with the same materials.

Conventional subjects are next in importance to naturalistic. They can be well carried out in appliqué. A bold design of flowers and leaves conventionalized and worked in colours, suggesting but not copying those of nature, can be made to look exceedingly handsome, whether arranged in one consecutive all-over design for a centre or a bordering or used as a powdering. As the work is flat, or in very low relief, no attempt at shading should be made.

Geometrical designs, varying from handsome scrolls to mere block patterns, suggestive of mosaic or patchwork, can also be employed, and are pleasing if taste is exercised in their selection and execution.

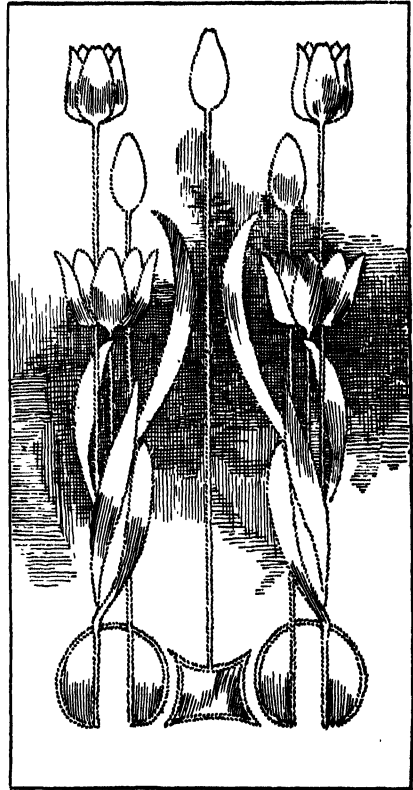


Fig. 445.—Appliqué Work: Shaded Silk on Canvas.

RIBBON WORK.

Embroidery executed with ribbons was popular in the eighteenth century and is now again in favour, but the materials are no longer confined to satin and silk, cloth and serge being also used. Many beautiful ribbons about $\frac{1}{8}$ inch wide are prepared for the work. There is much variety in the colouring of them; some are striped and others shaded.

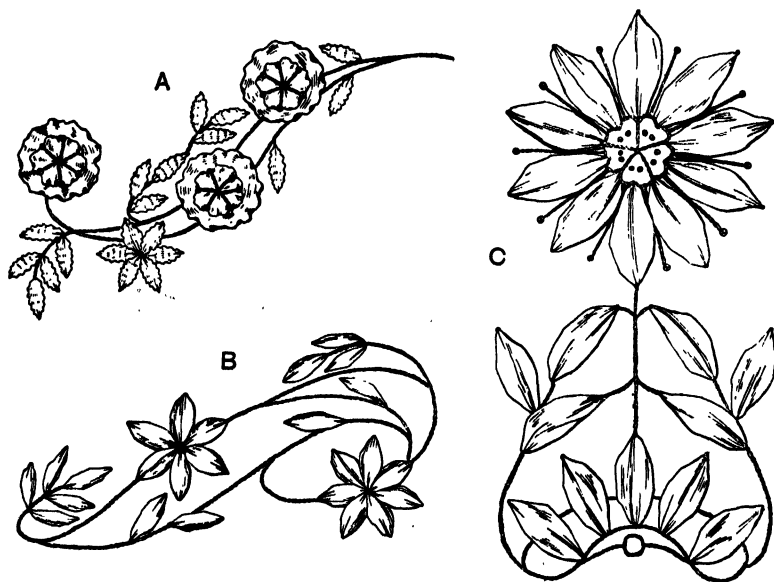


Fig. 446.—Varieties of Ribbon Work.

The "crinkled" ribbons are an especially dainty kind, slightly narrower than the plain makes, very soft, and of a crinkled crêpe-like texture.

Varieties of Ribbon Work.—In the diagram (fig. 446) three principal varieties of ribbon work are illustrated. In the trailing wreath at A the stems are worked in crewel-stitch with two strands of filoselle. The leaves are in stitches of crinkled ribbon in shades of yellow and green, one straight stitch being made for each section, except in the larger spray to the left, where each leaflet is represented by a single chain-stitch. The small flowers are made with straight stitches, one stitch for each petal. The larger flower is more elaborate. For it, two differently-shaded ribbons are used, either crimson and pink or pink and white. The darkest colours are put round the edge of the flower. To make a rosette three-inch lengths of the two ribbons chosen should be cut and each piece joined into a ring. Round the pale edge of the darker ribbon a fine but strong gathering-thread should be run and drawn up until the ribbon forms a circle rather less than an inch across. This should be



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tacked down to the background to form the outer portion of the flower. The second ribbon ring is similarly, but more tightly, gathered, and is sewn inside the larger round. Lastly, the extreme centre is filled up with a few stitches in green and yellow silks to suggest the stamens of the flower. Larger rosettes can be made by adding more circles of the gathered ribbon in different shades of the colour chosen and sewing them down one within the other; the small roses are daintier for work on silk or satin.

At B in fig. 446 another variety of the work is illustrated. Here shaded ribbons are used, the colours being green for the leaves, and blue, heliotrope, and *chaudron* for the flowers. Each leaflet and petal is represented by a single stitch with the ribbon, made additionally effective by being raised over a padding stitch previously worked with white darning or knitting cotton.

It may be seen both here and at A that the (so-called) flowers, buds, and leaves may vary from a single ribbon-stitch to seven or even more stitches arranged in different positions. The stems in B are worked in filoselle silk, as were those in the spray above it. At C is shown a different and rather newer kind of the embroidery, executed with ribbons $\frac{3}{4}$ inch wide. These are procurable in many colours, several carefully graduated shades of the tint selected being used in each piece of the work. The ribbon is a special make, somewhat cottony in quality, self-coloured, and always dull and rich in tone. Single stitches are made with this as with the narrower ribbon, but unless an exceptionally large and sharp needle is used, it is best to pass each end of the ribbon through a stiletto hole made at top and bottom of the space to be covered by it. The cut edges are sewn down on the wrong side of the work, and on the right side a few light but secure tacks along the selvages effectually keep the ribbon in position. In the illustration shades of apricot ribbon are used, combined with stitchery in flame-red crewel silk upon a background of heliotrope satin.

Embroidery in silk only has been introduced into these three samples, but other accessories are frequently employed. In connection with the wider ribbons fine gold thread is used for the scroll-work and in parallel rows as a boundary for lines of arrasene. Extremely fine and wire-like cord is also used with good effect, especially when the colour blends well with the tints of the rest of the embroidery.

A slight admixture of tinsel in these gimps is an additional advantage, but the introduction of much metal is in bad taste. Spangles or sequins when used in ribbon-work are satisfactory in proportion to their small size. Those of a gold, copper, blue, or green lustre, if no larger than the head of a toilet-pin, may well be employed in considerable quantities arranged in little sprays and wreaths apparently strung together with stitches of silk, or merely scattered over the background, or sewn down to serve as the centres of flowers.

Designs and Uses of Ribbon Work.—Designs for ribbon work are now plentiful and excellent, especially those taken from old models, and

they are so simple in character that an average worker will have no difficulty in arranging her own. It must be remembered to mark the pattern for narrow ribbon work very lightly on the background, merely indicating the positions for the various stitches, and not outlining the whole of the space they are to occupy, as the ribbon always sets more or less informally and discloses markings made near the selvages.



Fig. 447.—Ribbon Work for Satin Cushion.

Ribbon work is used also on reticules, fan-bags, blotter-covers, small screens and panels, and all other articles to which such delicate and slightly-raised embroidery can be appropriately applied.

KNICK-KNACKS.

Apart from the actual embroidery, the question has always to be considered: How shall the work be made up into the articles proposed? As the effect of the finest productions may be spoilt by bad mounting, the point is important.

Where there is any doubt, owing to the size or elaboration of the work, of an amateur's being able to mount it successfully, professional assistance should be sought. Inspection of any bazaar stall shows how little care is

but too often taken with this part of the work. Even such apparently simple knick-knacks as pin-cushions often fail to please owing to clumsy seaming or insufficient stuffing.

Many shapes are made up upon a stiff card foundation. In covering the sections with silk the needle must not pierce through to the right side of the work, where it will inevitably leave a mark; all tacking threads must be on the wrong side, caught across and across from edge to edge of the fabric. Circular cards are most easily and neatly covered by running a thread round the extreme edge of a larger circle of fabric and drawing it closely in when the card is in position.

Filling.—For padded cushions, wadding and scraps of all kinds are to be discouraged as being hard and lumpy for the pins to pierce. A bag of the required shape and size, made of unbleached calico or similar strong but soft fabric, and very tightly filled with bran, makes the best filling for a pin-cushion cover, and is inexpensive. Vegetable down is often commended as a useful stuffing for pillows, but, like flock and other such cheap materials, is at best only suited for temporary purposes or for hard wear, as in cushions for boating and garden use. Down forms the softest and most luxurious stuffing, and after that feathers of varying qualities. For really handsome embroidery the difference in price between the best and an inferior style of mounting should not be considered.

Tea-cosies are among the numerous useful household articles which may be made at home and embellished with embroidery. They should be thickly wadded and quilted inside, not made up in the flabby manner only too characteristic of the amateur.

Lining Bags and Reticules.—Dainty fan-bags and reticules are among the easiest of knick-knacks both to embroider and to make up, as there is usually scope for but little work, though that should be of the best, and the mounting consists chiefly of seaming and hemming.

It is usual to line bags, and when this is done in the following way no seams will be seen inside them. If the intended cover is to be made in two pieces, lay one on the other, both wrong side outwards; if it is to be in one piece, fold it in half in the required position. Having cut the lining to the size of the embroidered material, arrange it similarly, right side inwards, and lay it upon the doubled covering. Make a firm seam through the four thicknesses of fabric, along the bottom and up the side or sides, but not along the top of the intended reticule. Then, if the hand is inserted at this free end between the two layers of the covering, the bag can be pulled right side out, and it will be found that both cover and lining are in the right places and no seams visible. Along the mouth the raw edges of covering and doubling can be turned in and the two sections slip-stitched together all round. A running or set of rings is necessary to contain a draw-string.

Embroidered Book-Covers.—Embroidered book-bindings are very much in favour, and some exceedingly ornate ones are to be seen in the show-rooms of the art schools. The decoration chosen for such a purpose

must be of a kind appropriate to the character of the book inside. The works of certain poets may be so bound as to suggest their contents, special flowers being embroidered on the covers, and perhaps a quotation from the verses within. Scroll patterns worked in gold thread and coloured silks are a fitting cover for almost any author.

Vellum, painted, embroidered, or both, is now frequently used for book-covers.

Book-covers need much care in making up, and can be managed in two ways. One is to procure a strip of material nearly double the length of the opened book, and to turn up half the superfluous inches at each end to form a pocket into which the cover of the book can be slipped. This kind of holder is comparatively easy to mount, as it is limp and needs no stiffening. If it is of silk or brocade, a silk lining should be added and an interlining of flannel; if plush or velvet is employed, this extra thickness will rarely be necessary.

Embroidered bindings are most likely to prove successful if sent to an expert to be mounted, as few amateurs possess the requisite press and other accessories. In cases where this is undesirable the work can be done at home, but less satisfactorily. In covering a book that is already bound the strip of embroidery should be laid in position and the edges of it turned inside and there glued down. They should then be concealed with a leaf of paper stuck over them. At the top and bottom of the back it is sometimes possible to slacken the binding slightly with a knife, to push down the edges of material into the space thus made, and to secure them there with glue.

Blotters may be mentioned in connection with book-covers, as there is a certain similarity between these articles. The one illustrated in fig. 448 is notable for the effectiveness of the comparatively simple ornamentation upon it. On an article for frequent use much elaboration would be out of place. The colour scheme, also, of this example is worth remarking as a hint for similar knick-knacks. The background is of old gold figured silk tapestry or brocatelle, and the design is composed of appliqué pieces of soft silks. The colours of these include shades of pink and green. Alternatively, the design may be in pale salmon and moss-green on a ground of peacock-blue.

Frames.—Photograph frames are favourite backgrounds for embroidery. In such a position the work can hardly be too delicate, as anything conspicuous in colouring would draw the eye away from the picture instead of forming a suitable setting for it. Ribbon work, often mixed with scrolls and clusters followed out with minute spangles, is now popular, while, as far as designs are concerned, sprays and wreaths of flowers tied with flowing bows and ends of ribbon are graceful and pretty.

It is not easy with ordinary tools to cut photograph and miniature frames accurately from wood, or from cardboard stout enough to make a suitable foundation for them. If a paper pattern is prepared, any picture-framer or mount-cutter will copy it in the material desired, and, if neces-

sary, will bevel the edges. A white-wood photograph frame makes a good and cheap background for covering with embroidery. Novices should remember to see that the central space in any frame is made somewhat larger than appears to be necessary, as the covering of the mount will slightly intrude upon it.

Embroidered Caskets.—In addition to the knick-knacks already named

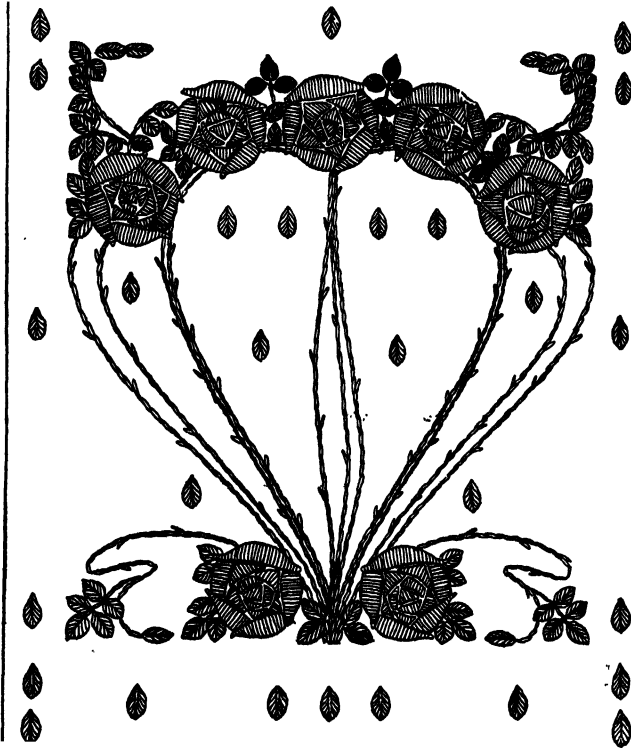


Fig. 448.—Design for Cover of Blotting-book.

and figured in these pages, caskets covered with embroidery should also be mentioned. They may range in size from a large chest to a ring-box.

The framework for good embroidery must be worthy of it, and various repositories now make a speciality of boxes, large and small, of suitable wood or cardboard properly put together, and especially intended for covering. Miniature chests of drawers to hold small treasures are dainty and useful when nicely made.

Various accessories are necessary, and should not be grudged by those who like to do a thing well. Metal hinges, fastenings, escutcheons, handles, corners, and so on, if not obtainable from the makers of the caskets and boxes, can be bought from dealers in fretwork materials. But here again,

if the novice find herself unequal to such carpentry as is involved, the work should be sent on to an expert for completion.

Wall Pockets.—A welcome touch of colour is sometimes given in a room by a wall pocket. This term employed generally may be said to include hanging receptacles for holding many different articles, such as magazines, letters, keys, duster, or feather-brush. The variety of form and make is, of course, great, and the fabrics chosen must be selected in accordance with their intended position. For use in a bedroom a washing material

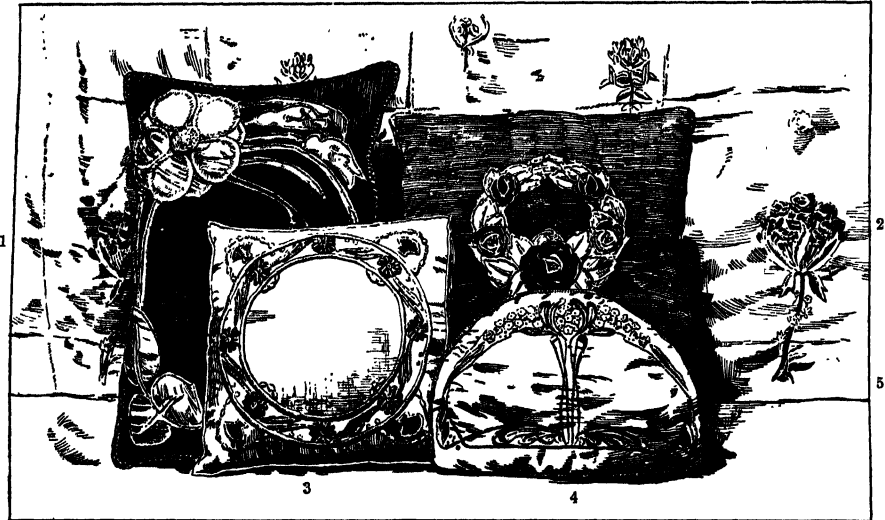


Fig. 449.—Examples of Embroidery and Embroidered Appliqué Work. (Liberty & Co., Ltd.)

1. Cushion of rough bronze-green serge with appliqué work in shaded silks; flower outlined with long and short stitches, with a centre of French knots; leaves and stems outlined with short stitches set at an angle. 2. Cushion of grey-blue satin with appliqué wreath of roses in silk, outlined with stitches suited to preceding. 3. Embroidered Linen Cushion. 4. Ivory Satin Tea Cosey embroidered with forget-me-nots in natural colours. 5. Chinese silk curtain embroidered by native artists from a "Liberty" design.

seems appropriate; in a sitting-room, on the contrary, richness of fabric and brightness of colour are allowable.

The simplest form of wall-pocket resembles a large envelope with the top flap extended, the lower pieces being slightly bowed out to allow of easy access to the contents. It can be contrived out of an embroidered strip of silk or plush, suitably lined, stiffened with buckram, and surrounded with cord concealing the firm stitches which sew it into shape. Horn-shaped pockets made of a twisted piece of buckram covered and lined are also familiar and favourite shapes.

Other Knick-knacks.—Many more knick-knacks might be mentioned as affording scope for the art of the embroidress. In general make and principle they would be more or less similar to those already alluded to here. Although details of form and ornamentation vary considerably, there is little need therefore to mention what are merely matters of course,

or else knick-knacks of passing interest devised to meet the craving for novelty.

KNITTING.

In these knitting patterns the following abbreviations are used:—For knit plain, k.; for purl, p.; for knit 2 together, decrease; for increase by putting the thread over the needle, over (where the increasing is otherwise worked, it will be mentioned); for repeat the following stitches, *.

Knitted Stockings and Socks.—Stockings and socks are knitted with wool, and less frequently with silk specially intended for the purpose. Knitting wools vary from the coarsest heather “wheelings” and yarns to soft, delicate kinds, Andalusian, Lady Betty, Merino, and Shetland, suitable for children’s wear or the finest work. For knitters of experience it is not a bad plan to work from a new and well-fitting woven stocking or sock. Having procured wool and pins of suitable sizes, make a strip in plain knitting to ascertain the number of stitches and rows required to form one square inch. It is then possible, by a little calculation, to copy the size and shape of the pattern stocking. A beginner, or even an average knitter, will, however, require detailed instructions to work by, and the following directions for a sporting stocking and a silk sock are therefore given as useful standards for working both. A few general directions will also be found helpful. Socks and stockings are begun with either a ribbed top or a fancy hem from 3 to 6 inches deep, which is not included in measuring the other portions of the work. The former, which consists merely of a certain number of rounds of 2 p. and 2 or 3 k. alternately, is the easier to knit; a double or hem-top is contrived by knitting 3 inches plain, then a round of holes (by working thread forward, knit 2 together all the way round), and then another 3 inches of plain work. The cast-on stitches are picked up on other pins and the two sets knitted off together, one stitch from each needle at the same time. When this hem has been folded along the line of holes, these form a small knotted heading. With regard to the measurements of the hose, a variety of scales of proportions have been published, many of which are extremely useful in a general way. At the same time it will usually be found that a given scale has to be adapted to the particular measurements of the person for whom the hose are being worked; so that, after having grasped the main facts of some really reliable scale, it is still as well to work by a pattern sock or stocking, or by detailed written instructions.

Stockings for men often have a top worked in a fancy pattern. As this portion is to be turned over, the right side of it must be on the wrong side of the leg, otherwise one or other part will be inside out when the stocking is completed. The simplest way of effecting this is, when the top is done, to turn the work inside out and knit in rounds in the reverse direction to that before adopted.

The legs and feet of hose can be knitted plainly; in open work (for ladies and children) or in a fine rib. The latter makes them more elastic and also more closely fitting. Plainly knitted hosiery has always one purl or seam stitch carried down the centre of the back of the leg, and on either side of this are worked the decreasings which regulate the shape.

Cycling and shooting stockings, and also men's socks, often have the leg and instep worked in cable knitting. This is begun below a ribbed top of 10 plain and 3 purl stitches alternately, and is worked as follows:—*, slip 5 stitches on to an extra pin and keep them in front of the work, knit 5, then knit the 5 stitches from the extra pin, purl 3, and repeat. Work 6 rounds of ribbing and repeat from *.

There are various ways of knitting heels. Some workers make the flap by working some 40 rows backwards and forwards on about 41 stitches (a knit row and a purl row alternately), and then decrease in every row on both sides of a centre of 11 stitches until only that number remain. The following forms a more comfortable heel:—Work the flap as above; knit to within 1 stitch of the centre, decrease, k. 1, *turn*; k. 1, decrease, k. 1, *turn*; k. 2, decrease, k. 1, *turn*; k. 3, decrease, k. 1, *turn*; continue thus to work one more stitch before the decreasing in every row till all the stitches are worked off. When the heel flap is knitted and then decreased to 10 or 12 stitches, the instep must be worked. For this, pick up on the heel needle as many stitches as there are rows down the side of the flap, and knit 2 stitches off the next needle which has still the instep stitches upon it. Work the stitches remaining on both instep needles on to one pin, except the last two, which should be knitted off on to a new needle. With this latter take up also as many stitches as there are rows along the other side of the heel-flap, and half the stitches left from the heel-flap from the next or first needle. After this proceed in rounds, decreasing in every other round at the end of the first and beginning of the third needle, and working off the second or instep needle plainly, till the total number of stitches on the first and third needle equal the number of those on the instep. Work a sufficient number of inches without decreasing, then begin the toe. The following is a good pattern:—*1st round*, k. 6, decrease, repeat. Seven plain rounds. *9th round*, k. 5, decrease, repeat. Six plain rounds. Continue in this proportion till:—*31st round*, k. 1, decrease, repeat. Two plain rounds. *34th round*, k. 2 together all round. Divide the remaining stitches on to two pins and cast off together in pairs.

Gentleman's Shooting or Golf Stocking with Fancy Top.—Materials, 6 skeins of 5-ply fingering in heather mixture, and 1 skein blue; 4 needles, size 14. Cast on 81 Heather (h). *1st to 7th rounds*, k. 6, p. 3 h. *8th*, k. 3 h., 6 Blue (b). *9th*, k. 3 h, p. 6 b. *10th to 13th inclusive*, k. 3 h., p. 6 b. *14th*, k. 6 h., p. 3 h. *15th to 46th*, k. 6 h., p. 3 h. Then turn the stocking inside out and begin the leg, which is entirely worked in Heather. K. 7, p. 2 for 58 rounds. *To shape the leg*, k. 7, p. 2, decrease, k. 5, p. 2, k. 5, decrease, p. 2, k. 7; then rib as usual. *2nd to 7th rounds of shaping*, k. 7, p. 2, k. 6, p. 2, k. 6, p. 2, k. 7. *8th*, k. 7, p. 2, decrease, k. 4, p. 2, k. 4,

decrease, p. 2, k. 7. 9th to 14th, k. 7, p. 2, k. 5, p. 2, k. 5, p. 2, k. 5. 15th, k. 7, p. 2 together, k. 5, p. 2, k. 5, p. 2 together, k. 7. 16th to 21st, k. 7, p. 1, k. 5, p. 2, k. 5, p. 1, k. 7. 22nd, k. 7, decrease, k. 4, p. 2, k. 4, decrease, k. 7. 23rd to 28th, k. 12, p. 2, k. 12. 29th, k. 5, decrease, k. 5, p. 2, k. 5, decrease, k. 5. 30th to 35th, k. 11, p. 2, k. 11. 36th, k. 4, decrease, k. 5, p. 2, k. 5, decrease, k. 4. 37th to 42nd, k. 10, p. 2, k. 10. 43rd, k. 5, decrease, k. 8, decrease, k. 5. 44th to 49th, k. 20. 50th, k. 5, decrease, k. 6, decrease, k. 4. 51st to 56th, k. 18. 57th, k. 4, decrease, k. 6, decrease, k. 4. 58th to 63rd, k. 16. 64th, k. 3, decrease, k. 6, decrease, k. 3. 65th, k. 14. 66th to 68th, k. 14. 69th, k. 2, decrease, k. 6, decrease, k. 2. 70th, k. 12. 71st to 73rd,



Fig. 450.—A Fancy Stitch for Stocking Top.

NAWAB SALAR JUNG BAHADUR

k. 12. 74th, k. 1, decrease, k. 6, decrease, k. 1. 75th to 78th, k. 10. 79th, decrease, k. 6, decrease. 80th to 83rd, k. 8. 84th, k. 3, decrease 4 times, k. 3. Knit 50 rounds in rib as usual. *For the heel*, take 15 stitches each side of the centre, and work 22 rows alternately knit and purl. *To turn the heel*, k. 17, decrease, k. 1, turn, p. 5, p. 2 together, p. 1, turn, k. 6, decrease, k. 1. Continue widening the heel thus until all the stitches are used; then pick up 22 stitches on the right-hand side of the heel, knitting the stitches as they are picked up, then take 3 stitches off the front needle; rib front of foot and take the last 3 stitches on to another needle and pick up 22 stitches on the other side. *For instep*, decrease at the third stitch from the instep in each of the side needles in every alternate round, until there are 66 stitches in all. Knit about 56 rounds or length required. *For the toe*, divide the stitches, by having half on the front needle, and the other half on the two side ones. Decrease in every alternate row at the beginning and end of the front needle, at the beginning of one and

the end of the other side needle. When 10 stitches are left on the front needle, cast off and finish.

Another Top for the same Stocking.—Materials, a small ball of blue and another of red knitting silk in addition to the heather wool; cut 4 long strands of each silk. In h, cast on 96. Knit 9 rounds 2 k. 2 p. in h. *10th to 14th*, knit plain h. *15th*, k. 1 b., 11 h., 1 r., 11 h., and repeat. *16th*, 1 h., 1 b., 9 h., 1 r., 1 h., 1 r., 9 h., 1 b. *17th*, 2 h., 1 b., 7 h., 1 r., 3 h., 1 r., 7 h., 1 b., 1 h. *18th*, 3 h., 1 b., 5 h., 1 r., 5 h., 1 r., 5 h., 1 b., 2 h. *19th*, 4 h., 1 b., 3 h., 1 r., 7 h., 1 r., 3 h., 1 b., 3 h. *20th*, 5 h., 1 b., 1 h., 1 r., 9 h., 1 r., 1 h., 1 b., 4 h. *21st*, 6 h., 1 r. and b. at the same time, 11 h., 1 r. and b. together, 5 h. *22nd*, 5 h., 1 r., 1 h., 1 b., 9 h., 1 b., 1 h., 1 r., 4 h. *23rd*, 4 h., 1 r., 3 h., 1 b., 7 h., 1 b., 3 h., 1 r., 3 h. *24th*, 3 h., 1 r., 5 h., 1 b., 5 h., 1 b., 5 h., 1 r., 2 h. *25th*, 2 h., 1 r., 7 h., 1 b., 3 h., 1 b., 7 h., 1 r., 1 h. *26th*, 1 h., 1 r., 9 h., 1 b., 1 h., 1 b., 9 h., 1 r. *27th*, 1 r., 11 h., 1 b., 11 h. *28th to 33rd*, k. h. *34th*, 1 r., 11 h., 1 b., 11 h. *35th*, 1 h., 1 r., 9 h., 1 b., 1 h., 1 b., 9 h., 1 r. *36th*, 2 h., 1 r., 7 h., 1 b., 3 h., 1 b., 7 h., 1 r., 1 h. *37th*, 3 h., 1 r., 5 h., 1 b., 5 h., 1 b., 5 h., 1 r., 2 h. *38th*, 4 h., 1 r., 3 h., 1 b., 7 h., 1 b., 3 h., 1 r., 3 h. *39th*, 5 h., 1 r., 1 h., 1 b., 9 h., 1 b., 1 h., 1 r., 4 h. *40th*, 6 h., 1 r. and b. together, 11 h., 1 r. and b., 5 h. *41st*, 5 h., 1 b., 1 h., 1 r., 9 h., 1 r., 1 h., 1 b., 4 h. *42nd*, 4 h., 1 b., 3 h., 1 r., 7 h., 1 r., 3 h., 1 b., 3 h. *43rd*, 3 h., 1 b., 5 h., 1 r., 5 h., 1 r., 5 h., 1 b., 2 h. *44th*, 2 h., 1 b., 7 h., 1 r., 3 h., 1 r., 7 h., 1 b., 1 h. *45th*, 1 h., 1 b., 9 h., 1 r., 1 h., 1 r., 9 h., 1 b. *46th*, 1 b., 11 h., 1 r., 11 h. *47th to 52nd*. Knit h. Turn inside out.

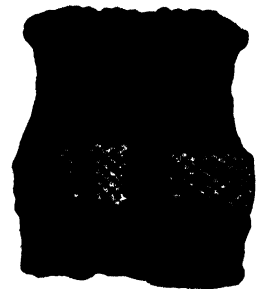


Fig. 450 A.—Another Top for the same Stocking. (Section of design).



Fig. 451.—A Knitted Silk Tie.

Gentleman's Silk Sock.—Use 3 ounces good quality knitting silk and 4 needles, No. 16 or 17. Cast on 72, and work in a rib of 2 k., 2 p., for $2\frac{1}{2}$ or 3 inches. Then work for 8 inches in a rib of 5 k., 3 p. For the heel, take 18 stitches on each side of the seam stitch (37 in all), and leave

35 on front needle for the instep. Work one of the heels given above. After turning the heel, pick up about 20 stitches on each side, and shape as previously directed, keeping the rib on the front or instep needle and knitting the others plain. Work about 6 inches (more or less as required) for the foot, and then begin the toe, which must be worked plain on all the needles.

A Knitted Silk Tie.—Two colours, or a dark and light shade of the same coloured silk, will be required, a $\frac{1}{2}$ -ounce reel of each. Peri-lusta may be substituted for knitting silk if preferred. Four needles, No. 16 or 17. Cast on 40 stitches, 10 on the 1st needle, 20 on the 2nd (middle) needle, 10 on the 3rd. With Colour A knit 12 rounds plain*. With Colour

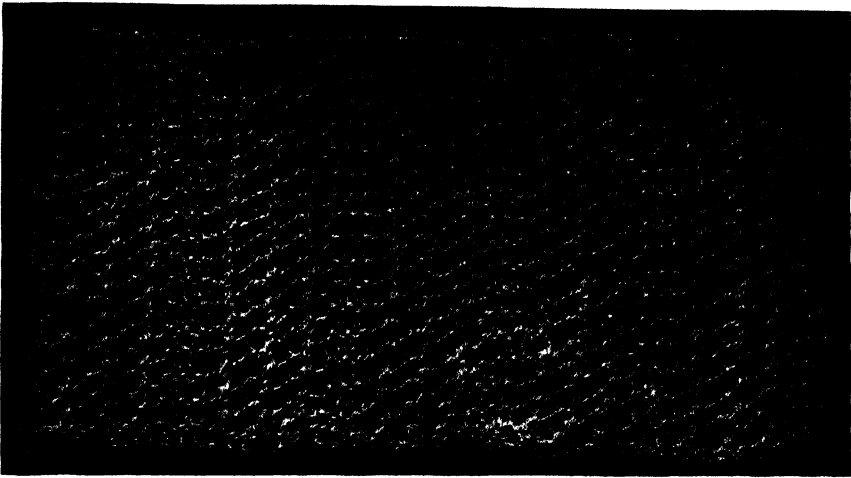


Fig. 451 A.—A Good Stitch for a Motor Scarf.

B knit 2 rounds. With Colour A knit 8 rounds; repeat from * in stripes throughout the tie, but at the end knit 12 rounds in Colour A as at the beginning. *To shape for the neck*, after knitting 10 inches, * knit 2, decrease on the 1st needle, knit to within 4 stitches of the end of 3rd needle, decrease, k. 2. Knit 3 rounds without decreasing; repeat from * till the stitches are reduced to 18, 10 on the middle needle and 4 on each of the others. During the shaping it will be found necessary to slip stitches from the middle needle on to each of the side needles occasionally, taking 2 stitches at a time from each side, so as always to keep the centre stitch in the same place. Work 12 inches for the neck on the 18 stitches, either in stripe or in Colour A, taking care to measure the neck when the knitting is stretched. *To shape the other end of the tie*, *, k. 2, increase 1 by knitting into the front as well as the back of the 3rd stitch, k. to within 3 of end of 3rd needle, increase a stitch as before, k. 2. Knit 3 rounds without increasing; repeat from * until the stitches again number 40, 10 on the 1st needle, 20 on the 2nd, 10 on the 3rd. In the increasing it will again be found necessary to slip stitches

from the side needles on to the centre one; 2 should be taken at a time from each side. Work on the 40 stitches, in stripe, for 14 inches or the length required; cast off and sew up the ends neatly.

A Good Stitch for a Motor Scarf.—This stitch works out well in fine wool, silk, or Peri-lusta. Cast on, with a pair of bone needles No. 5, any number of stitches divisible by 9, with 3 over. A good average number

of stitches is 48 in wool; for silk or extra fine wool 18 stitches or two patterns more would be advisable. Knit the first row. *2nd row*, *, k. 3, over, decrease, over, decrease, over, decrease; repeat from * all along, and continue to repeat row 2 for the length required. A motor scarf should be about 2 yards long and 10 to 12 inches wide.

Lady's Useful Mitten.—For a very thick, warm mitten, use 2 ounces 3-ply wheeling; for a lighter quality, the same quantity 3-ply fingering. Four needles, No. 12 or 13. Cast on 48 stitches, 18 on 1st needle, 15 on each of the others. To shape the wrist, knit in rib of 2 plain, 1 purl, all round for 3 inches. Then 1 inch plain knitting. *To shape for the thumb, 1st round.* On 1st needle, k. 2, increase by knitting into the front and also the back of 3rd stitch, k. 6, increase again in the same way, k. 8, complete round without increasing. Knit 2 rounds with-

out increasing. *4th round*, k. 2, increase as before, k. 8, increase, k. 8. *5th and 6th*, no increasing. *7th*, k. 2, increase as before, k. 10, increase, k. 8. *8th and 9th*, no increase. *10th*, k. 2, increase, k. 12, increase, k. 8. *11th and 12th*, no increase. *13th*, k. 2, increase, k. 14, increase, k. 8. *14th and 15th*, no increase. *16th*, k. 2, increase, k. 16, increase, k. 8. *17th*, no increasing. There should now be 30 stitches on the 1st needle. *18th*, k. 5, thread the next 15 stitches on a piece of wool (they will be used later for the thumb) and knit the remaining 40. On these 45 stitches knit about 17 rounds or $1\frac{1}{2}$ inches; then $1\frac{1}{2}$ inches ribbing, k. 2, p. 1, and cast off loosely. *For the thumb*, take 6 stitches on the 1st needle, 6 on the



Fig. 452.—A Lady's Mitten.

2nd, and 3 on the 3rd. Pick up and knit 3 stitches from the opening. On these 18 stitches k. plain for 1 inch, k. 2, p. 1 for $\frac{3}{4}$ of an inch. Cast off loosely and fasten neatly. In working the second mitten, increase for the thumb at the end of the 1st needle instead of at the beginning.

CROCHET.

To save space, the following abbreviations have been used throughout these directions:—Double crochet, d. c.; treble crochet, t.; chain, ch.

Single Crochet.—There is always one loop on the hook when the work is begun; insert the hook in the work, put the thread over the hook and draw it through both loops.

Double Crochet.—Insert the hook in work, put thread over hook and draw it through, then over the hook, and draw it through the two loops.

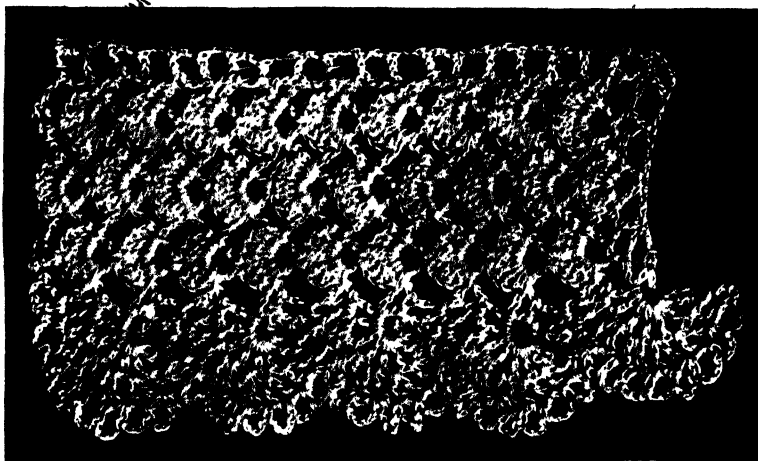


Fig. 453.—A Simple Shortway Edging.

Treble Crochet.—Put the thread over hook, hook into work, thread over, draw through, thread over, draw through two loops, then again over and draw through two.

A Simple Shortway Edging.—Crochet cotton No. 18 and a steel hook No. $3\frac{1}{2}$; or for a very fine trimming, cotton No. 30, hook No. 5. Make a ch. of 18, turn, and into the 6th from the hook work 1 t., * 2 ch., miss 2 ch., and into the next work 1 t., 2 ch., 1 t.; repeat from * 3 times more. *2nd row.*—Turn with 3 ch., and into the 1st loop work 1 t., *, 1 ch., 1 t.; repeat from * 5 times more, 2 ch. and into the next loop work 1 t., 2 ch., 1 t., 2 ch., and into the next work 1 d. c., 5 t., 1 d. c., 2 ch., and into the next loop 1 t., 2 ch., 1 t., 2 ch., 1 t. on the t. of previous row, 2 ch., 1 t. in the loop of 6 ch. *3rd row.*—Turn with 6 ch., 1 t. on the t. of previous row,

1 d. c., 7 t., 1 d. c. in the loop of 2 ch., 2 ch., 1 t., 2 ch., 1 t. on the 4th t. of group of t., 2 ch., 1 d. c., 7 t., 1 d. c. in the next loop of ch., *, 2 ch., 1 t., 2 ch., 1 t. into the first space in the group of t. of previous row; repeat from * in each of the other 5 spaces. *4th row.*—Turn with 4 ch., work 1 d. c. into the first space of previous row, *, 4 ch., 1 d. c. into next; repeat from * 8 times more, 2 ch., 1 t., 2 ch., 1 t. into the last space of the group,

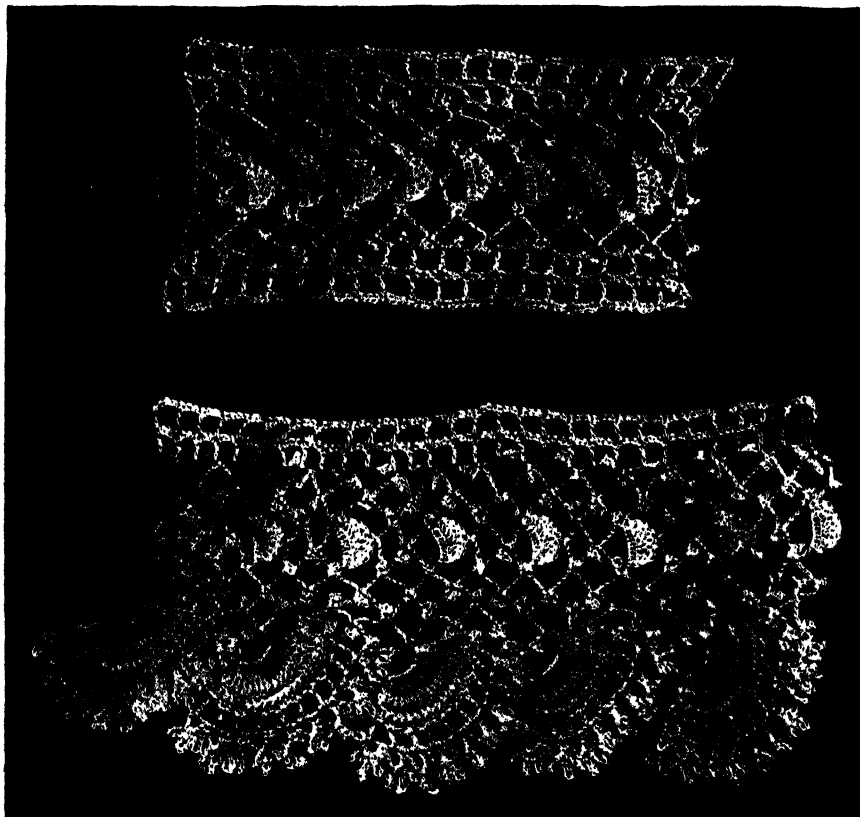


Fig. 454.—Insertion for Lingerie, with Lace to Match.

2 ch., 1 t., 2 ch., 1 t. on the 4th t. of next group, 2 ch., 1 d. c., 7 t., 1 d. c. in the next space, 2 ch., 1 t., 2 ch., 1 t. on the 4th t. of last group, 2 ch., 1 t. on the single t., 2 ch., 1 t. in the loop of ch. *5th row.*—Turn with 6 ch. and work 1 t. on the 2nd t., 1 d. c., 7 t., 1 d. c. in the next space of 2 ch., 2 ch., 1 t., 2 ch., 1 t. on the 4th t. of next group, 2 ch., 1 d. c., 7 t., 1 d. c. in the next space, 2 ch., 1 t., 2 ch., 1 t. in the next space. *6th row.*—Turn with 3 ch. and into the first space work 1 t., *, 1 ch., 1 t.; repeat from * 5 times more, 2 ch., 1 t., 2 ch., 1 t. on the 4th t. of next group, 2 ch., 1 d. c., 7 t., 1 d. c. into next space, 2 ch., 1 t., 2 ch., 1 t. on the 4th t. of next group, 2 ch., 1 t. on the t. of previous row, 2 ch., 1 t. in the loop of 6 ch.; repeat the last 4 rows for the length required.

Insertion for Lingerie, with Lace to Match.—This insertion and lace should be worked in No. 50 for lingerie, but if done in coarser thread, about No. 30, or No. 12 D.M.C., they are equally suitable for trimming afternoon tea-cloths, d'oyleys, tray-cloths, &c.

Make 27 ch., form last 5 into a picot, 5 ch. Turn, 1 d. c. into the 12th ch. 8 ch., form 6 of these into a picot, 5 ch., 1 d. c. into the 6th ch. 8 ch., form 6 into a picot, 5 ch., 1 d. c. into 1st ch.

Turn *, 8 ch., form 6 into a picot, 8 ch., form 6 into a picot, 5 ch., 1 d. c. into last loop of first row immediately before the picot, 8 ch., form 6 into a picot, 5 ch., 1 d. c. into next loop before the picot. Repeat for next loop. Turn, 8 ch., form 6 into a picot, 8 ch., form 6 into a picot. 5 ch., 1 d. c. into last loop before the picot, 8 ch., 1 d. c. into next loop. Turn back on this 8 ch. loop, and work 8 d. c. over it. Turn again, 1 d. c. into 1st d. c., 6 t. into next 6 d. c., 1 d. c. into last d. c., 1 d. c. into the loop. 8 ch., form 6 into a picot, 5 ch., 1 d. c. into next loop. Turn, and repeat from *, putting a loop into the centre stitch of group of trebles.

When the insertion is long enough, make a "straightening line" of 4 ch., 1 t. before and after each picot, at each side. Over these lines work a row of double stitch as closely as possible. Work a second row at each side, putting the trebles into those of the preceding rows, and finish off with a row of close double-stitch over these lines.

The Lace.—36 ch., form last 6 into a picot. 5 ch., 1 d. c. into 22nd ch.; 8 ch., form 6 into a picot, 5 ch., 1 d. c. into the 17th ch. 8 ch., form 6 into a picot. 5 ch., 1 d. c. into the 12th ch. 8 ch., form 6 into a picot, 5 ch., 1 d. c. into the 7th ch. 10 ch., 1 d. c. into the 1st ch.

*, turn, into the 10 ch. loop work 1 d. c., 22 t.

Turn, 1 d. c. into each t., taking up the lower portion only of top stitch.

Turn, 1 d. c. into the lower portion of each d. c. of preceding row; 5 ch., 1 d. c. into next loop, before the picot. 8 ch., form 6 into a picot, 5 ch., 1 d. c. into next loop, 8 ch., 1 d. c. into next loop, turn back on this 8 ch., and work 8 d. c. into it. Turn again, and put 1 d. c. into last d. c., 1 t. into each of next 6 d. c., 1 d. c. into last d. c., 1 d. c. into the loop. 8 ch., form 6 into a picot. 5 ch., 1 d. c. into next loop.

Turn, 8 ch., form 6 into a picot, 8 ch., form 6 into a picot, 5 ch., 1 d. c. into next loop, 8 ch., form 6 into a picot, 5 ch., 1 d. c. between the 3rd and 4th trs., 8 ch., form 6 into a picot, 5 ch., 1 d. c. into next loop, 8 ch., form 6 into a picot, 5 ch., 1 d. c. into next loop, 8 ch., form 6 into a picot, 5 ch., 1 d. c. into next d. c., and 1 d. c. into each d. c. to the top. Turn, and work another row of double in the same way. 1 d. c. into next loop before the picot. Then put a single picot loop into each loop to the end. Turn, putting two picots into this loop as before, then a loop into each loop to the top. 8 ch., form 6 into a picot, 2 ch., 1 t. into last d. c., 2 ch., 1 t. into every second d. c. to the top.

Turn, 3 ch., 1 t. into first space down the side of this treble. Work 7 ch., 1 d. c., 7 ch., 1 d. c., 7 ch., 1 d. c., 1 d. c. into first space. Repeat into

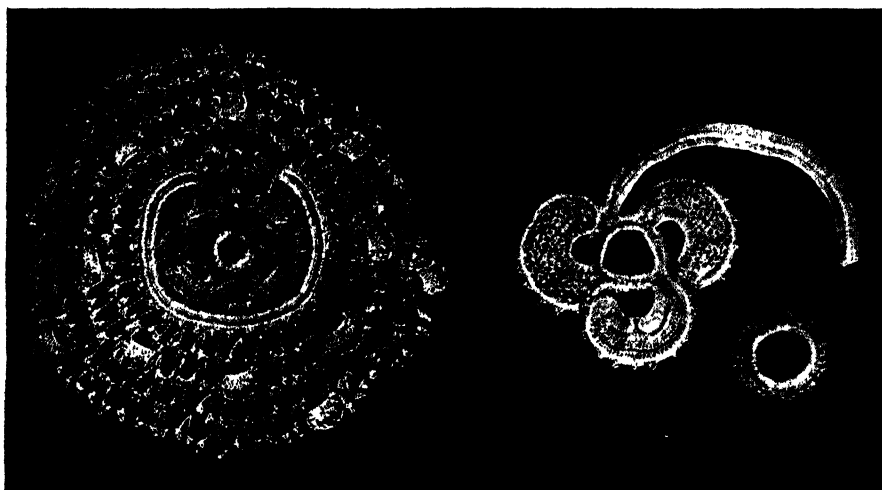
each 2 ch. space to the end of the edging portion, then two loops into next two, 1 group of treble into next loop, a loop into next loop.

Turn, as before, and put a loop into each preceding loop, and into the centre of the trebles.

10 ch., fasten to centre picot in last 2 ch. space. Turn and repeat from *, fastening the edging portion to the centre of the picots in next two spaces of preceding at the last double row, and beginning of last row.

When sufficiently long, work the straightening lines at the upper portion, as in the insertion.

Irish Lace Collar and Cuffs.—This beautiful collar (see plate) set is



No. 1.

No. 2.

Fig. 454 A.—Working Models of Irish Crochet. (Details of Collar and Cuffs.)

made in a combination of bébé lace and the heavy kind of crochet exemplified in the shamrock border.

Use No. 80 Irish lace thread for the very fine work, and No. 42 for the shamrocks, with No. 10 padding cotton and a very fine crochet-hook for the fine work, and a medium-sized one for the other.

Abbreviations used.—p. c. = padding cord; d. p. = double picot.

For No. 1 in fig. 454 A, wind the p. c. round a small mesh (a coarse knitting-needle will do) 18 times. Over the ring so formed work d. c. as closely as possible. Join first and last stitches.

Around this ring 8 “double picot loops” are formed, and these must be equally spaced, with the last one fastened to the centre of the first, between the two picots. Each picot loop is made thus: 10 ch., form 6 of these into a picot by hooking the thread through the 4th ch. and the stitch on the needle; 8 ch., form 6 of these into a picot, 4 ch., fasten to centre with 1 d. c.

2nd row.—After fastening the 8th loop to the centre of the first,



IRISH CROCHET COLLAR AND CUFFS

make *, 8 ch., fasten to the centre of next loop with 1 d. c. Turn back on this 8 ch. loop, and work 1 d. c., 7 t., 1 d. c. into it. Turn again, 5 ch., 1 t. into the first t., 2 ch., 1 t. into each second t., and into the last d. c. 5 ch., 1 d. c. over end of this loop. (This forms a "group of trebles".) Put a d. p. loop into centre of next loop, *, and repeat all round, fastening the last loop immediately before the first group of trebles. 5 ch., 1 t. into first space on the trebles. 3 ch., 1 t. into each space, and between the picots all round to end of last group of trs. A d. c. loop into next loop, and one into first 3 ch. space. Take a short length of 4-strand p. c. and fasten here, by putting 1 d. c. through the centre of it. Work 4 d. c. closely over it into each 3 ch. space, and fasten off the p. c. at the end, on the back of the work, with a few tight stitches. Cut away the superfluous p. c.

Continue putting 1 d. p. into each loop over the top, and fasten the last to the first double stitch over the p. c., where another similar piece is joined on, and a row of d. c. worked over it into the stitches of first row over p. c., putting a 5 ch. picot after each fifth d. c.

One d. p. loop into each loop and into the centre of the 5 d. c. between the picots all round.

In the next row form a "group of trebles" after each third d. c. loop.

Next row.—1 d. p. loop into each loop, and one into the beginning and end of each group of trebles. In the last row, put a group of trebles midway between those preceding.

One dozen of these motifs will be required for the collar and cuffs—six for the collar, and three for each cuff.

For the "Shamrock" (No. 2).—Make a cord of 4-strand p. c. Wind one end of it six times around the top of the thumb of the left hand, and into this ring work d. c. as closely as possible. Join first and last stitches. 30 d. c. over the p. c. Fasten to the ring, about one-sixth of the way round, with 1 d. c. Leave the p. c., and put 2 ch., 1 d. c. into every second of the 30 d. c., 1 d. c. into next on ring, turn; 2 ch., 1 d. c. into each space to top, turn; 1 d. c. into last space, 2 ch., 1 d. c. into each space to the end space. Turn, and repeat this row twice more, working down the top spaces to the p. c., over which put 1 d. c. Turn, and work d. c. over the p. c. closely into each space, putting a 5 ch. picot after each 5 d. c., 2 d. c. over the p. c. into next d. c. on ring, then 1 d. c. into each next d. c. for the same length as from the tip to the end of last leaflet. 30 d. c. over p. c. alone. Fasten to the ring, at the end of the first leaflet. Leave the p. c., 3 d. c. into last 3 d. c., 1 t. into each of next 22 d. c. 1 d. c. into each remaining d. c., and one into the ring. Turn, 5 d. c. into the 5 d. c., 1 t. into each t. 1 d. c. into each d. c. to top. Turn, 1 d. c. into each stitch to the end. Turn, 1 d. c. into each d. c. to top, and 1 over the p. c. Turn, d. c. over the p. c. into each stitch to end, putting a 5 ch. picot after each 5 d. c., 2 d. c. over p. c. into next d. c. on ring, then 1 d. c. over p. c. into each d. c. on ring for the same length as after the first leaflet. Repeat the first leaflet. Work d. c. over p. c. into half of the remaining space on ring, then over the p. c. alone for a length of $3\frac{1}{2}$ inches. Turn back, and missing the first 2 d. c., put 1 d. c.

into the 3rd, and 1 t. into each d. c. to the top, where the p. c. is fastened off behind the work with a few tight stitches.

Now wind the same kind of p. c. 8 times round the thumb, and into this ring work d. c. as closely as possible, joining the first and last stitches. Around this ring work a row of 7 ch. loops, fastened to each second d. c. with 1 d. c.

Sew this thickly padded ring over the centre of the shamrock.

Ten shamrocks are required for the collar and five for each cuff.

Cut the collar-shape out of a piece of tough paper or calico to the required size, and tack the shamrocks, face downwards, on this foundation. Then tack the fine motifs, with their sides just close enough to allow of their being joined with a bar equal to one-half of the "double picot" loop, and bring the lower edge down over the stem of the shamrock as far as it will extend. Then connect all the motifs, filling in all the spaces with loops and bars as required. The loops and bars must be worked from point to point of the shamrocks and motifs, and from one bar to another, so as to form an open groundwork; but no exact directions can be given for making them, as no two workers would produce them alike. They simply consist of chain, with picots here and there (see insertion for finger-ing), and must be so arranged as to keep the collar and cuffs in shape and perfectly flat.

Make a "straightening line" at the top, of a repetition of 5 ch., 1 t., so arranged that the ch. stitches form an even line with the edge of the foundation. Remove the lace from the foundation, cut away all ends of thread.

The cuffs are finished exactly in the same way.

The lace is now ready for cleaning, which is best done by immersing in warm soapy water, squeezing it until quite clean, and then rinsing thoroughly under a flowing tap of cold water. Squeeze as dry as possible, pull the lace into shape. Place face downwards on the ironing board, which has been covered with several folds of soft flannel under the ironing sheet. Cover the lace with a piece of calico, and press with a hot iron until the upper calico becomes quite dry.

Remove the calico, pull the lace into shape again, taking out every little crease, and pulling the picots into place; then finish off on the back of the lace itself with the iron, until the lace is quite dry.

Baby's Bootikin.—Use two small skeins white Andalusian wool and an ivory crochet hook, No. 12. Beginning at the sole of the foot, make 23 chain, turn, miss 1 ch., 1 d. c. into each of the next 22. *2nd Row.*—Turn, 1 d. c. into each of the next 22, taking up the back of each stitch only; increase a stitch by working twice into the last d. c. *3rd Row.*—Turn, and work 24 d. c. Work thus to the 12th row, increasing a stitch at the end of each row; the stitches should now number 33. *13th Row.*—Work on 15 stitches only, to form the toe cap, leaving the rest of the stitches unworked. *14th to 21st Rows.*—As 13th. *22nd Row.*—Make a chain of 19 to correspond with the stitches left at the other side of the toe

cap; turn, miss 1 chain and work, in backward sequence, from row 13 to row 1, decreasing a stitch at the toe end of each row, till the stitches again number 22. This forms the shoe. Sew the two sides together to form the heel, and the first and last rows to form the sole; draw the toe stitches together and fix into shape. *For the little Ornament at the Instep.*—Work 8 d. c. across the toe cap for 6 rows, working backwards and forwards and taking up the back of each stitch only; round the small square thus formed work a border of 3 ch., miss 1 d. c., 1 d. c. into next. *For the Leg.*—Beginning at the heel seam at the top of the shoe, work 1 d. c., 3 ch., miss

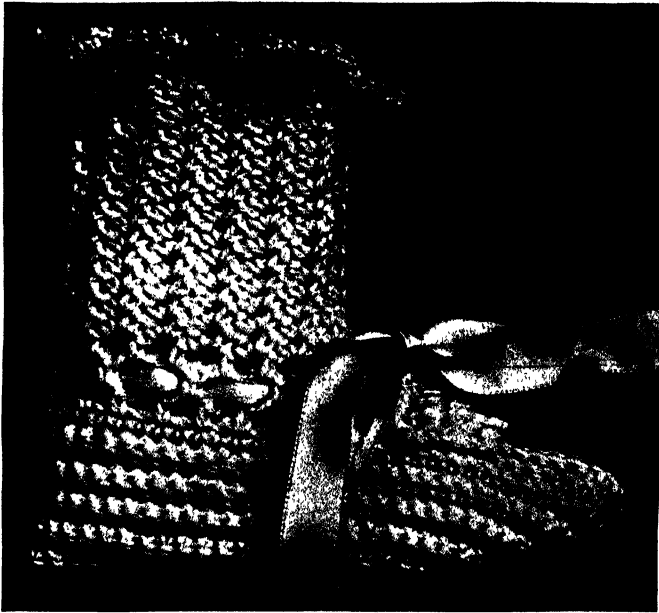


Fig. 455.—Baby's Bootikin.

1 d. c.; repeat all round, being careful to work under the little ornament on the front. *2nd Round.*—1 d. c. in the first group of chain, 3 ch., 1 d. c. into the next and every successive chain loop, except at the ornament, where the chain between the d. c. stitches is omitted on either side. *3rd Round.*—As 2nd. *4th Round.*—1 d. c., 2 ch., 1 d. c. into first chain loop; repeat into every loop except those on each side of the instep, where 1 d. c. only is worked, for 3 rounds. *8th Round.*—Work the 1 d. c.; 2 ch., 1 d. c. into every loop of previous round. Work thus till the leg measures 3 inches from the shoe. Finish the top of the leg with a border, by working into the first and each successive loop, 1 d. c., 1 ch., 1 t., 1 ch., 1 t., 1 ch., 1 t. Run a ribbon through the centre row of holes at the ankle.

Hairpin Work.—This is a variety of crochet, of which a fine example is given in fig. 455A. In this doyley there are 3 pieces of hairpin work. The centre piece consists of 40 loops on each side of the fork, the 2nd piece

has 120 loops, and the 3rd piece 260 loops. All these pieces should begin and finish with a 3- or 4-inch tag of Peri-lusta.

Take the first piece of hairpin work, thread the needle with one tag, and sew the central rib of the work to form a ring, use the other tag to

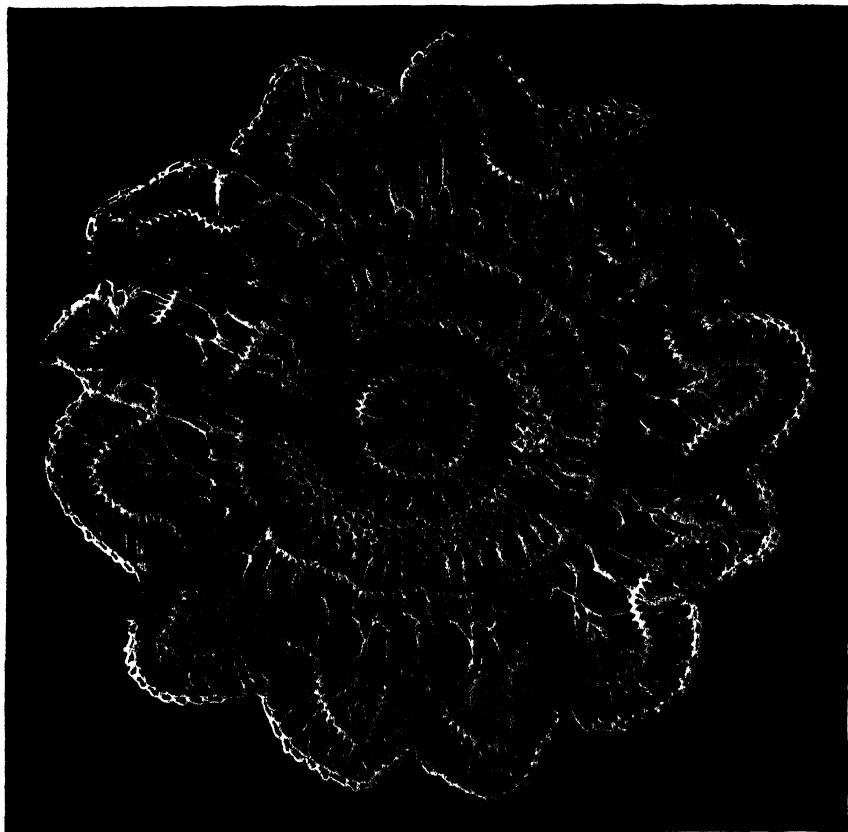


Fig. 455 A.¹—Doyley in Hairpin Work.

gather up the 40 inner loops for the centre of the doyley, and secure the cotton round the loops on the outside; work 3 rows of crochet.

1st Row.—* 1 tr. in 1st loop, 3 ch., 1 tr. in same loop, 1 tr. in 2nd loop, 3 ch., 1 tr. in the same, continue from * all round the doyley.

2nd and 3rd Rows.—Same as 1st row.

Take the 2nd piece of hairpin work, join in a circle, * do 1 d. c. under a hole of 3rd row, 3 ch., 1 d. c., taking 3 loops together of the 2nd piece of hairpin work, repeat from * all round the doyley.

Take the 3rd piece of hairpin work and unite to the 2nd piece, * work 1 d. c. in 3 consecutive loops of 2nd piece; 3 ch., 1 d. c. in each of 3 loops of 3rd piece; 3 ch., and repeat from * twice, 1 d. c. in 3 consecutive loops of

¹ Figs. 455 A, 455 B, 455 C, and 455 D are taken from the Peri-lusta Handbook, by kind permission.

2nd piece; 9 ch., 1 d. c. in each of 2 loops of the 3rd piece; 3 ch., 1 d. c. in each of the next 16 loops, join these d. c. into a ring by working 1 d. c. into the ch. which stands next to the 1st of them; 3 ch., 1 d. c. in each of the 2 following loops; 3 ch., 1 d. c. in the corresponding stitch of the long ch. stem; 5 ch., and now revert to * and repeat the same all round the doyley.

For the edge, 1st Row.—O, work 1 d. c. in each of the 16 loops that stand

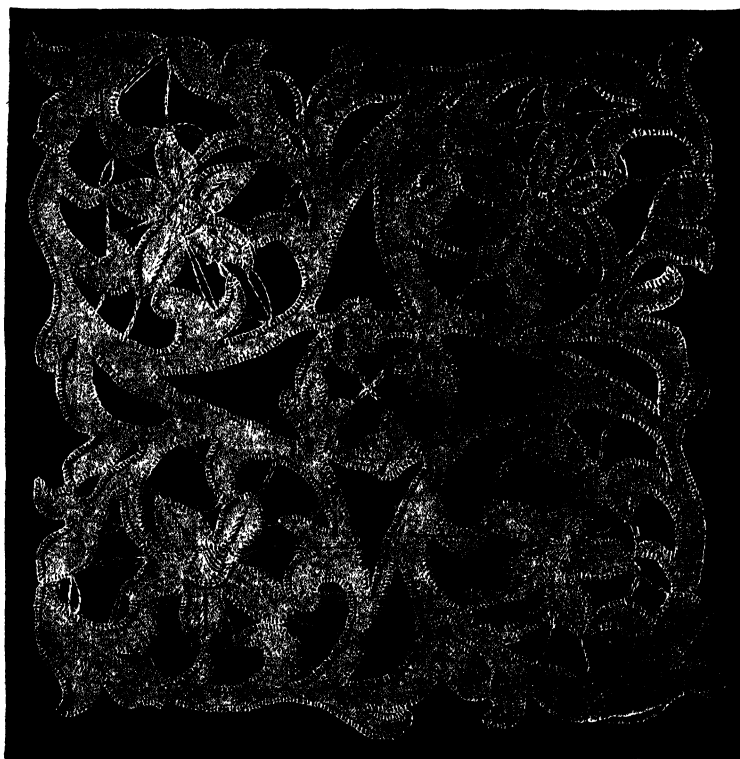


Fig 455 B.—Doyley in Cut Linen Work.

in the hollow of the scallop, and join these in a ring; * 3 ch., 1 d. c. in next loop, repeat round the scallop, then repeat from O all round the doyley.

2nd Row.—1 d. c. under 3 ch. of last row; 3 ch., 1 d. c. under the next 3 ch., and so on round the doyley.

VARIOUS KINDS OF FANCYWORK.

English Embroidery or Cut Work.—English embroidery, or “cut work”, consists in working a design on fine linen or lawn by cutting out the linen and then firmly sewing over the edges of petals or flowers. Satin stitch and button-hole stitch are both used in this form of embroidery. One

of the favourite uses to which it is put is that of monograms on handkerchiefs or underclothing, also on house and table linen.

Fig. 455B shows a doyley worked on fine white linen in Peri-lusta Teneriffe lace. The method is as follows. Trace the design on to the linen, then work over the lines of the design with button-hole stitch. Fill in the centre of the flowers with flat stitch, with a row of satin stitch round, then iron the doyley with a hot iron on the wrong side, cut the linen away from the

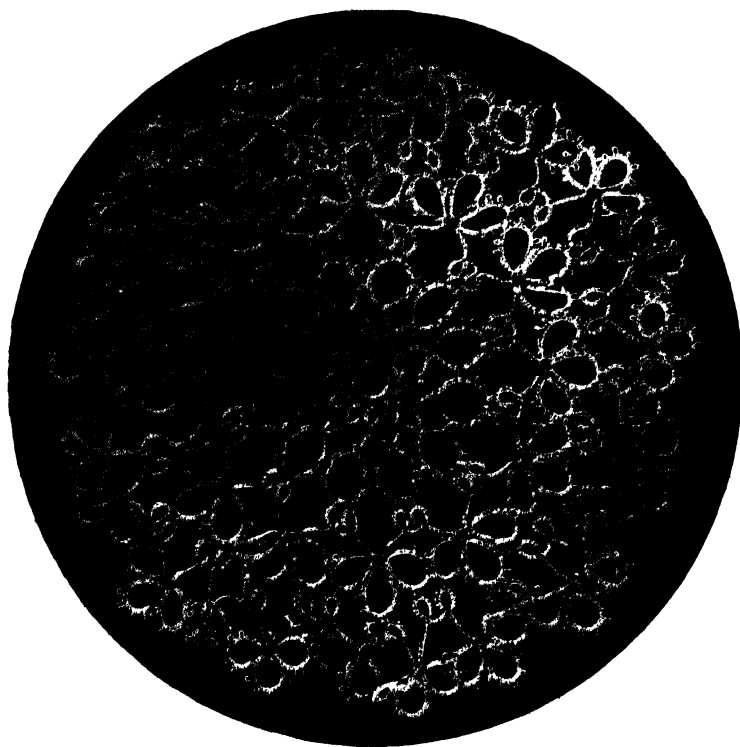


Fig. 455 C.—Small Round Doyley or Pincushion Cover, Shamrock Pattern, in Tatting.

button-hole stitch with a pair of sharp-pointed scissors and fill in the open spaces with lace stitches.

Satin Stitch.—Satin stitch is used in many kinds of embroidery, and consists in lightly “stuffing” the petals or stems of flowers, and then covering this stuffing with graduated stitches of great evenness and smoothness.

Guipure.—Guipure is a lace darned on a mesh previously netted or made on a frame.

Drapery Embroidery.—Embroidery is now applied in many forms to blouses, dresses, aprons, &c., ranging from coloured silks in elaborate designs to the cut-out Swiss embroidery or heavy over-stitch on simple morning blouses. The materials may be bought ready traced in the proper shape;

but it is more satisfactory to have the material cut or traced to the right pattern of the person who is to wear it when finished.

Smocking also comes under this head, chiefly for children's things.

Tatting.—In "genteel" days tatting was thought a most "elegant" occupation, and it has the reputation of showing off a pretty hand better than any other employment. It is worked with a shuttle and a pin, and is used for edgings, doyleys, trimming undergarments, pincushion covers, &c. It makes a very pretty border for handkerchiefs, collars, and so on, and some of the designs are particularly good.

Fig. 455c shows an attractive pattern, for which the following are full directions. Commence in the centre of the doyley. Make a loop with the shuttle thread, and work 1 d., 1 picot, 2 d. and 1 picot alternately 11 times, 1 d., draw up closely in a circle.

1st Round.—Make a loop with the shuttle thread, work 6 d., join to a picot of the large oval, do 6 more d. and draw up; reverse the work, and taking a second thread make a loop and do 5 d. stitches; make a loop with the shuttle thread, work 7 d., 1 picot, 2 d. and 1 picot alternately 8 times, 7 d., draw up; resume the 2nd thread and do 5 d. stitches; * reverse the work, make a loop with the shuttle thread, work 6 d., join to the next picot of the 1st large oval, 6 more d., and draw up; reverse the work, and with the 2nd thread do 5 d. stitches; make a loop with the shuttle thread, work 7 d., join to the last picot of the last large oval, 2 d. and 1 picot alternately 8 times, 7 d., draw up; resume the 2nd thread and do 5 d. stitches, and repeat from * till there are 12 large and 12 small ovals in the round. Do not forget to join the last picot of the last large oval to the 1st picot of the 1st large oval, and fasten off when the round is completed.

2nd Row.—Make a loop with the shuttle thread, work 6 d., join to the 3rd picot of a large oval of the previous round, 6 more d., and draw up; reverse the work, take a 2nd thread, and work 3 d.; reverse, make a loop with the shuttle thread, do 6 d., join to the 5th picot of the same oval of previous round, 6 more d., and draw up; reverse the work, resume the 2nd thread, and do 7 d. stitches; make a loop, and for the 1st leaf of a shamrock work 7 d., 1 picot, 2 d. and 1 picot alternately 6 times, 7 d., and draw up; make another loop close, do 7 d., join to the last picot of the 1st leaf of the shamrock, 2 d. and 1 picot alternately 6 times, 7 d., and draw up; make a 3rd loop close, do 7 d., join to the last picot in the 2nd leaf of the shamrock, 2 d. and 1 picot alternately 6 times, 7 d., and draw up; take 2nd thread and work 7 d. stitches; reverse the work and continue in the same manner, only joining the 4th picot of the 1st leaf of the shamrock to the corresponding picot in the 3rd leaf of the previous shamrock; at the end of the round join the last leaf of the last shamrock to the 1st leaf of the 1st shamrock; there should be 12 shamrocks in the round; fasten off.

3rd Row.—Make a loop with the shuttle thread, work 6 d., join to the 2nd picot of the middle leaf of a shamrock of the preceding round, 6 d., draw up; take a 2nd thread and work 3 d. stitches; make a loop with the shuttle thread, do 6 d., join to the 4th picot of the same leaf, 6 d., draw up;

resume the 2nd thread and work 8 d. stitches; then for the shamrock (which is smaller than those in the 2nd round) make a loop with the shuttle thread, work 5 d., 1 picot, 2 d., 1 picot, alternately 6 times, 5 d., draw up; make another loop close, do 5 d., join to the last picot of the 1st leaf of the shamrock, 2 d. and 1 picot alternately 6 times, 5 d., and draw up; again make a loop close, do 5 d., join to the last picot in the 2nd leaf of the shamrock, 2 d.

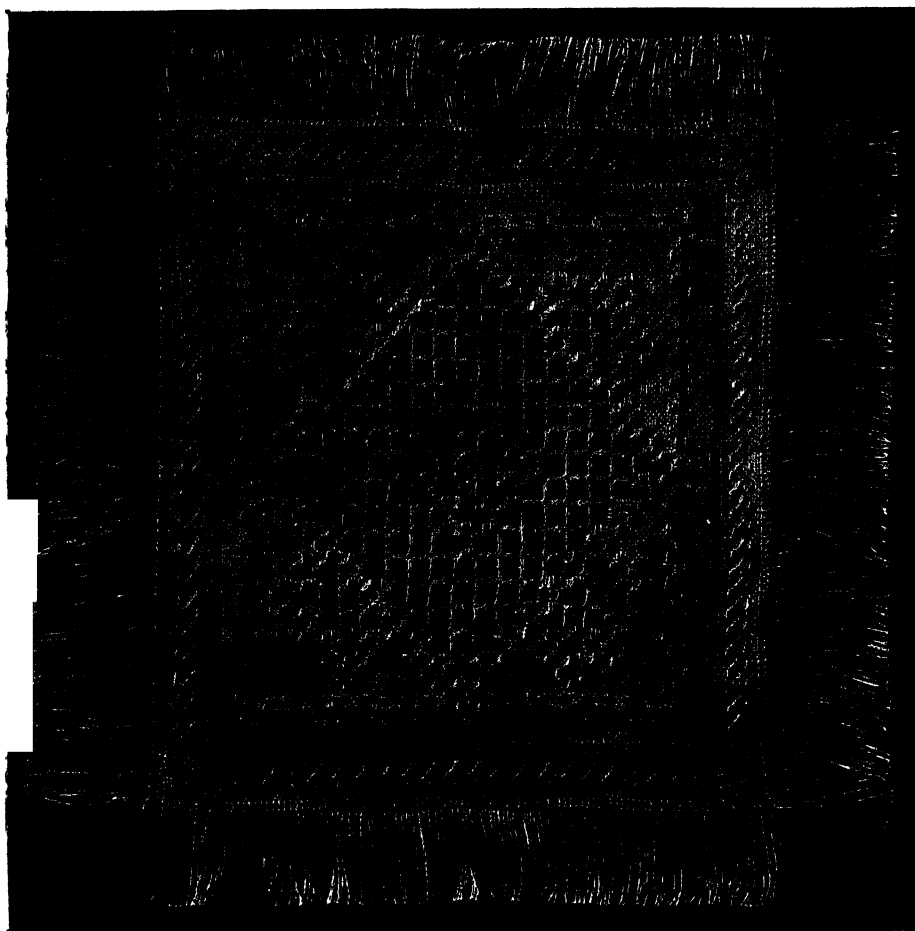


Fig. 455 D.—Doyley in Hardanger Work.

and 1 picot alternately 6 times, 5 d., and draw up; resume the 2nd thread and work 8 d.; make a loop with the shuttle thread, do 6 d., join to the 2nd picot of the 3rd leaf of the shamrock of the preceding row, 6 d., and draw up; on the 2nd thread work 3 d. stitches; make a loop with the shuttle thread, do 6 d., join to the 1st picot (the one next the join) of the 1st leaf of the next shamrock of the last round, do 6 d., and draw up; resume 2nd thread and do 8 d. stitches; make a shamrock as before, only joining the

4th picot of the 1st leaf to the corresponding picot of the last leaf of the previous shamrock; take the 2nd thread, work 8 d. stitches and repeat as from the beginning of the round, there should be 24 shamrocks in this round; this completes the doyley, which should be ironed between damp cloths with a hot iron.

Hardanger Work.—This is a kind of drawn-thread work, but is simpler in design. It is worked on coarse canvas, and the threads of the material must be carefully counted before beginning the work. Some of the designs rather resemble cross-stitch when finished, but the open spaces lend it more variety than the Russian work. It is strong and handsome, adapted for tea-cloths, mats, night-dress cases, &c. The edging stitches are all straight.

Fig. 455D shows a design for a doyley in Hardanger work. It is worked on linen canvas $13\frac{1}{2}$ inches square. Commence with the flat stitch about 3 inches from the edge of the canvas. The open work round the centre is worked in the darning stitch, with a small fancy stitch. In the centre of each column of threads a loop is formed with the darning thread round a strong pin to make a little picot, which is fastened as you darn further. The curve in the centre and corner patterns is formed by the drawing in of the darning stitches. The middle squares are also filled in by four loose button-hole stitches, which form a little cross in the centre. The doyley is hem-stitched round 2 inches from the edge. Then draw the threads of canvas to make the fringe.

Chenille Embroidery.—Excellent effects can be obtained with flat chenille, which can be applied to capes, blouses, table-cloths, cushions, &c., usually in floral designs. Knitted fringes of the same material are easy to do, and most useful for trimmings of dresses, edgings, &c. Some of these fringes are exceedingly handsome.

Round chenille is also used very often, and, especially combined with silk, ribbon, or silver and gold, is very rich in effect without being heavy in weight.

HOME ART WORK.

METAL EMBOSsing.

The metals embossed by amateurs are brass, copper, and more rarely silver. They are purchased in thin plates. Brass is the firmest to work upon. Copper is softer, and more satisfactory in colouring. The process of embossing is practically the same whatever metal is used.

Embossing Tools.—The work is wholly done by means of punches struck with the hammer. All the tools are blunt, as the metal must on no account be pierced. The majority are convex, but a few are concave. Some

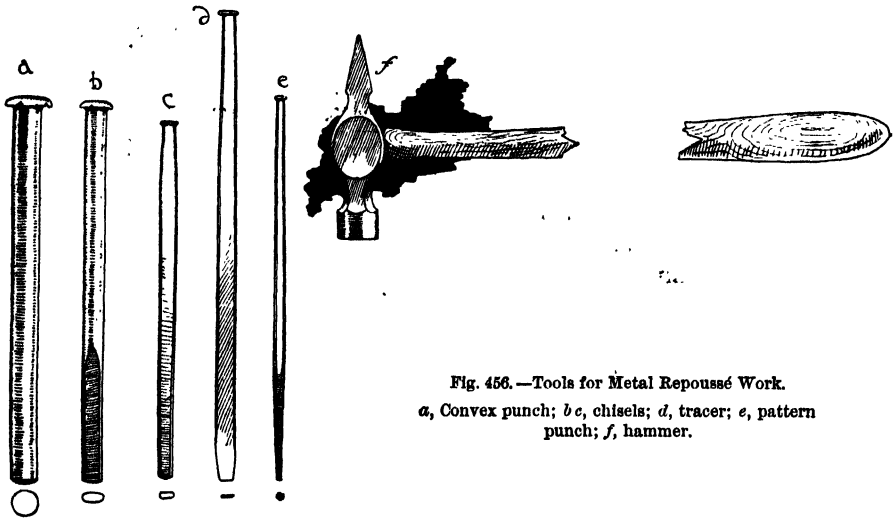


Fig. 456. —Tools for Metal Repoussé Work.
a, Convex punch; *b c*, chisels; *d*, tracer; *e*, pattern punch; *f*, hammer.

resemble blunt screw-drivers or chisels; others impress a small fanciful pattern on the metal. To make such salvers as those shown in fig. 457, the only tools required are a large convex punch, two chisels, a tracer, a pattern punch, and a hammer. (See fig. 456; also fig. 537.)

The metal, if very thin and soft, can be worked on a half-inch sheet of lead laid on a thick board, to which both metals are screwed down. If a firmer material is used, higher relief can be obtained by means of a bed of either wax composition or pitch. To prepare the latter, take soft pitch 7 parts, resin 4 parts, tallow 1 part, and bath-brick 6 parts. Heat the bath-brick, and add gradually when the other materials are melted. Variation of the proportion of tallow makes the bed harder or softer.

Method of Embossing.—A pitch bed should be warmed over a lamp sufficiently to allow the brass or copper to be pressed into it by hammering down the corners. If very sparingly oiled, the metal often proves more manageable. The pattern is drawn upon it with ink, or else is sketched upon paper stuck over the surface of the brass. A stiletto or tracing-wheel will mark the outlines even through the paper, which should then be washed off.

The further tracing must be evenly and clearly done to ensure that flowering scrolls and curves have no awkward bends or angles in them. The tracer (*d*) must be lightly but firmly held in the left hand, and never

Fig. 457.—Examples of Repoussé Work. By Bailey and Hart (Guild of Handicraft), Chipping Campden.

allowed to slip while it is driven along the outlines with taps of the hammer. A curved tracer is sometimes used for details which the chisel blade will not reach. Any tooling on the background is put in next, some portions with a pattern punch, and others with a plain punch.

For the actual embossing the pitch bed is again warmed, and the metal raised and refixed wrong side upwards. Vigorous but judicious pressure exerted by hammering down punches, such as those at *a*, *b*, and *c*, is applied to all portions of the design which are to be in relief; but as some details naturally need less force than others, it is wise to do all lightly at first, and repeat the work in the portions which are to be most prominent. It is not easy to judge the effect of the embossing from the back of the metals. To obviate the necessity of raising it for inspection, a cast of the back in plaster of Paris will show where alteration is needed. When the work is finished the metal is lifted and laid on a board. The bent corners are then hammered down and the outlines retraced where necessary.

The subsequent lacquering or polishing should be entrusted to a professional, but the plate can be roughly cleaned by warming it and rubbing it with methylated spirit, or by boiling and scrubbing it, and afterwards dressing it with metal polish.

The mounting of repoussé work, unless simple, is beyond the powers

of most amateurs. Pen and pin trays can be bent into shape with strong pliers, and match-boxes present no great difficulty. The edges of trays and similar articles are much improved in appearance if goffered or fluted with pliers.

BENT IRONWORK.

The iron used in bent ironwork is obtainable by the pound in ribbon-like strips about 2 feet in length, and from $\frac{1}{8}$ to $\frac{1}{2}$ inch in width. The $\frac{1}{4}$ -inch width is most generally useful, but two or more sizes are often used together.

Tools.—The necessary tools (fig. 458) are:—(a) Shears for cutting the metal, and round-nosed (b) and square-nosed (c) pliers for working it. Some

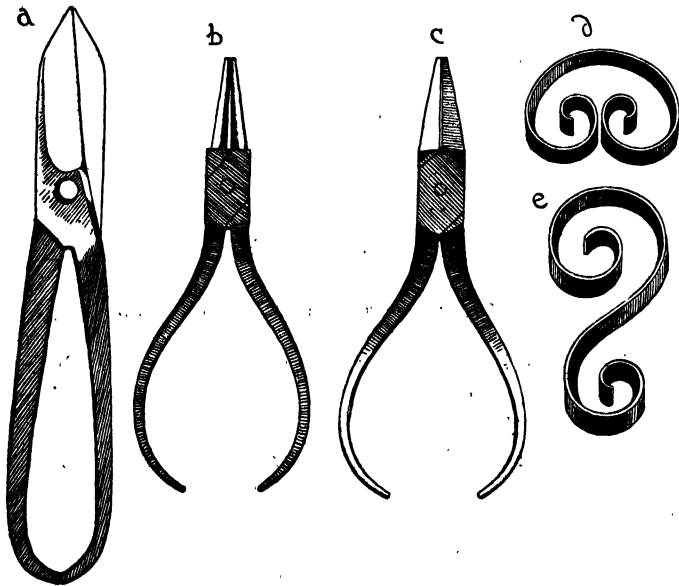


Fig. 458.—Bent Ironwork Tools and Scrolls.

a, Snips or shears; b, round-nosed pliers; c, square-nosed pliers; d, C scroll; e, S scroll.

copper wire is useful; also a foot-rule and a yard measure, a strong apron to cover the dress, leather gloves to protect the hands, and vaseline in case of accident. Soap rubbed over the hands prevents blistering during hard work. But with properly burnished tools an adroit craftsman soon learns to escape injuries.

Making Scrolls.—To make scrolls a novice should begin by cutting off with the shears a 6-inch length of iron and curling it till it is shaped like a C (d). Hold the straight strip in the square pliers, and, taking the round-nosed pliers in the right hand, bend it into the form of a U. Next, holding this near the base, curl one side of it in and round to the desired curve.

Then work the other side of the strip inwards until the two correspond. While working, wind the metal over the round pliers, and hold, smooth, and grasp it with the square pliers till the shape is perfect. Make the S scroll (e) similarly, only reversing the turn of the curves. Considerable practice will be needed, and for convenience thin, soft iron should be used at first.

Variations of these shapes are met with, but are not essential. Only C scrolls were employed in the basket shown in fig. 459, and the effect is

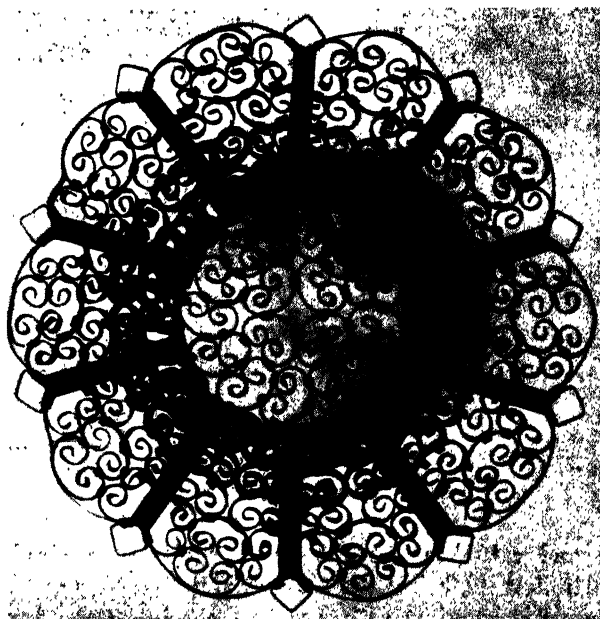


Fig. 459.—Bent Ironwork Basket.

perfectly satisfactory. The iron used is $\frac{1}{8}$ -inch, and the bands are $\frac{1}{4}$ inch wide. The latter are split down for about an inch at the top, and when wound round the scrolls and edging of the basket they keep the work together. The entire basket measures 8 inches across.

Using the Scrolls.—All bent ironwork is composed of various scrolls made in different sizes, and arranged in patterns in an infinite variety of ways by putting C and S scrolls back to back, one under the other, one within another, and so on. Elaborate designs should be planned in full size on paper, and the strips of iron, as they are curled to the required shapes, can then be laid in the relative positions they are to occupy.

All the parts are united by clamping and wiring them, usually in pairs. Tin is softer for clamping than iron; a biscuit box cut up with the shears will provide a large supply of strips. Copper wire is sometimes used. The colouring is of no consequence, as the entire work is afterwards blackened. A strip of the material used must be cut three times as long as the width

of the bands which it is to enclose. One end of the strip should be bent with the pliers to form a hook passing round the scrolls, and the other end folded over and pressed down very tightly. Loose clamping is a sure sign of a bad worker. The ends of the clamps must be on the side of the scrolls on which they will be least conspicuous.

The articles to be constructed of bent iron include grilles, fire-guards, stands for lamps, lanterns, candles, and vases, window-blinds, bracket and mirror frames, and many other fanciful trifles, such as match-holders, suspension hooks, and caskets.

Finishing the Work.—The accessories required for mounting bent iron-work are obtainable from dealers in the tools. As they are of wrought iron their preparation is beyond the powers of the ordinary amateur.

As scrolls, however arranged, form too irregular a margin for some purposes, the work is frequently edged with a plain band of metal clamped down at intervals to the swells of the scrolls. A more elaborate edging is a strip goffered by curling it about the round-nosed pliers and attached by clamps to the depressions of the waves. Brass and copper scrolls and bands are sometimes introduced into ironwork, as also are portions of embossed metal, such as brass, copper, or iron flowers, rosettes, and leaves. But iron alone is sufficient for the amateur, and ribbon-work made of it is more pleasant to handle if, when finished, it is painted over with dull black.

LEATHER EMBOSSING.

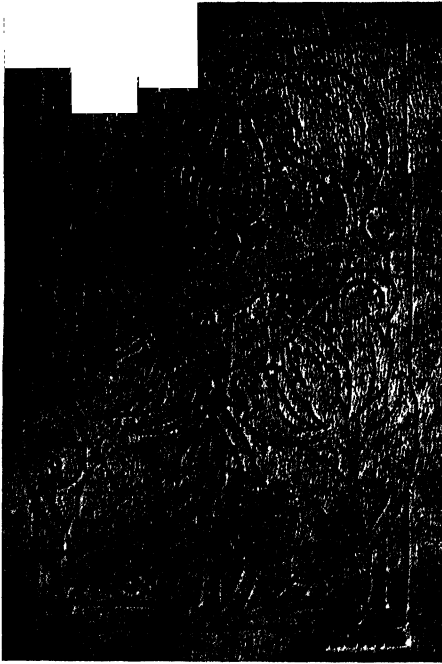
Cow-hide and calf-skin are the two materials prepared for leather embossing. The former, being the stouter, is preferable for large and more important work, but requires rather more force in its manipulation. The leather articles which an amateur can emboss are very numerous and varied, ranging from a mat to a wall-hanging, and including furniture coverings, book and portfolio covers of all sorts and sizes, caskets, photograph-frames, and panels.

Tools.—For simple work the only tools required are the tracer (fig. 460, *a*), bent awl (*b*), modelling tool (*c*), hammer (*d*), and one or more punches (*e*).

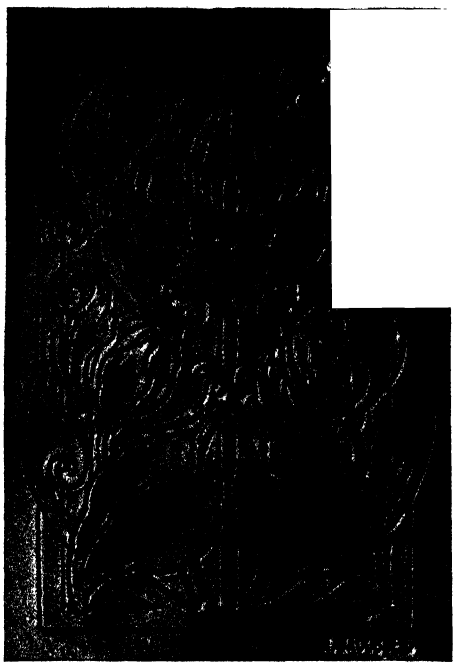
The leather must be as homogenous in texture as possible, and rather a larger piece than seems necessary should be used, as it is held down at the edges, which are afterwards cut away.

Method of Embossing.—The leather should be moistened with a sponge on the under-surface, and then fixed, right side up, to a board by means of drawing-pins. Calf-skin need not be moistened unless it is unusually tough.

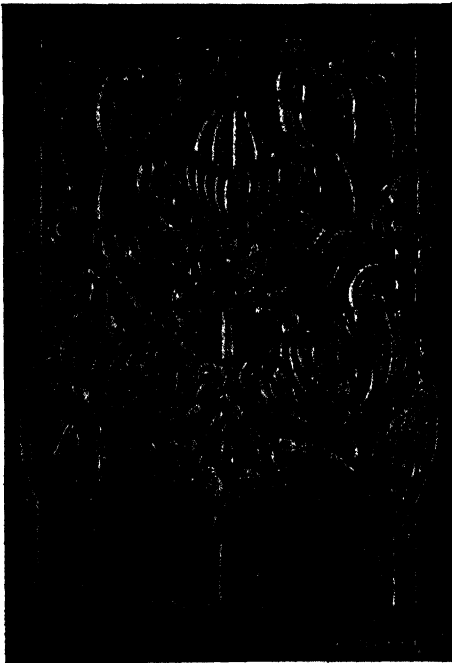
An expert may pencil or indent a pattern directly upon the leather; ordinary workers should draw the design on paper and pin it into position. The outlines on the paper are then followed with the tracer with force enough



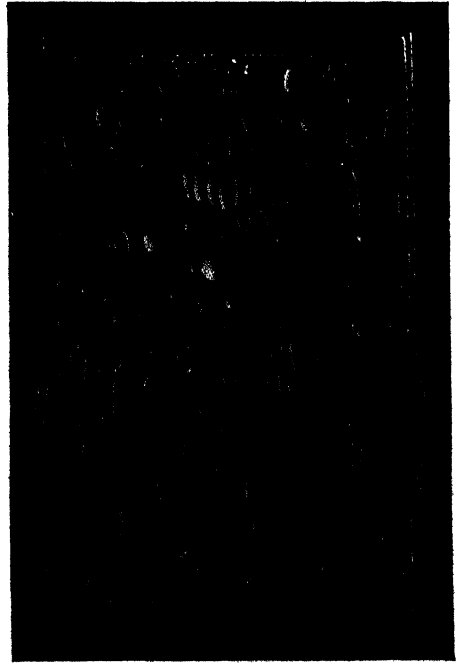
1, Design Traced.



2, Design Incised



3, Background Pressed Down.



4, Final Stages: Modelling, Punching, and Staining.

to mark, but not to cut, the surface of the leather beneath. When the paper is removed, the tooling can be commenced. Cow-hide usually needs a preliminary sponging. If this causes the leather to stretch, it must be raised and re-arranged. All the outlines of the pattern are next incised with the tracer (*a*), held like a pencil and pushed along the course to be followed. Afterwards such details as cannot be reached by this tool or by a tracing-

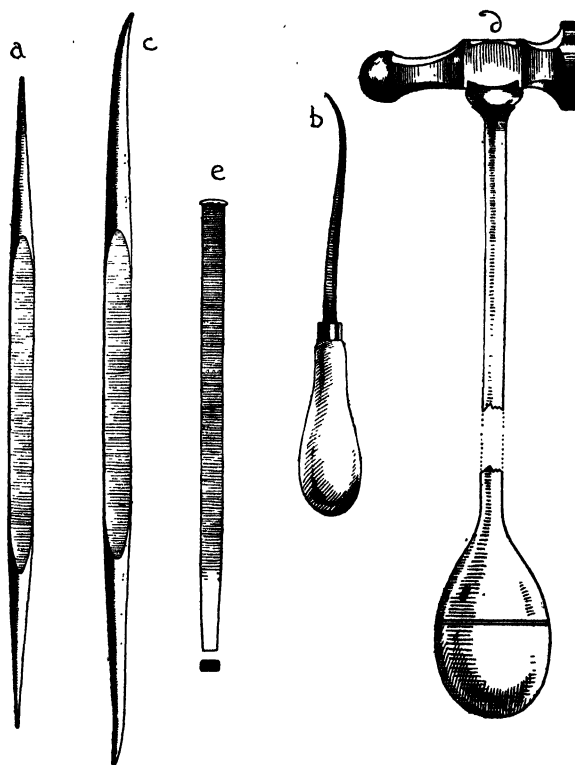


Fig. 460.—Tools for Leather Embossing.

a, Tracer; *b*, bent awl; *c*, modelling tool; *d*, hammer; *e*, punch.

wheel are cut with the awl. Careful sponging may be resorted to whenever the leather becomes unmanageably dry and tough. Faults not too deeply marked can be removed, after damping, by firmly smoothing them out with a knife-blade or some similar flat tool. The cutting should penetrate to half the thickness of the leather and be quite straight downwards.

When all the outlines are evenly incised the modelling tool is used to open out the cuts, much or little as required, and to press back and roll down the edges. This is tedious work, but much depends upon its proper execution. Either end of the tools (*a* and *c*) is used according to the requirements of the design. Punching, the last process, is very easy, but must not be overdone either on the background or on details of the pattern, where it may be introduced for the sake of variety. The punch (*e*) held upright and struck

smartly with the hammer, leaves an impression of the design on its base. There is a great variety of punches, each marking a star, trefoil, scroll, circle, or other device. The work, when finished, may be varnished, or if preferred it may be painted or gilded.

Leather work, except in simple articles, should be mounted by a book-binder or dealer in the tools.

The card-case shown in fig. 461 is in low relief, very slightly embossed, and the background impressed with crosses from a punch. The straight



Back of Case: design traced.



Front of Case: completed work.

Fig. 461.—Embossed Leather Card-case.

outlines here and in similar work are added last of all. More elaborate modes of leather embossing can be tried when this method is fully learnt. The design is incised as described, but sometimes the lines are under-cut afterwards—that is, the tool at the base of the upright incision is carried at right angles into the leather on both sides of this first cut. When the edges are rubbed back the work stands out with much boldness. Another method of embossing leather is by means of large tools or punches shaped to form the outlines required and impressed so firmly as to throw the remaining surface into higher relief.

Designs in still higher relief are executed by similar and yet more vigorous pressure from the underside of the leather, the depressions made being kept in position with a filling of prepared plaster of Paris and glue, or with modelling wax. Silver paper spread over all the back before the paste is quite firm keeps the whole neatly in place. High embossing is not done on a board but on a softer bed, folded baize answering the purpose well.

CANE BASKET-WORK.

The canes used in basket-making are round, split, or flat; the thinnest are equal in thickness to a No. 17 knitting-needle, the stoutest to an ordinary pencil. The numbers vary with different dealers. A beginner should use moderately fine materials for the weaving, and coarser canes for the spokes. Canes are sold by the pound, costing from 1s. 4d. to 2s. 6d. They are sent out in long skeins, out of which the strands may be drawn singly as required. Each length, before working, should be loosely wound into a ring and laid in cold or tepid water for a few or for many minutes according to its thickness. Green rush and fine cane-coloured raffia plait and coloured canes are often introduced into basket-work.

Tools.—In addition to the soaked canes, workers need a strong pair of scissors, a knife, and a piercer or stiletto, to separate the weaving temporarily when fresh spokes are to be inserted in close work.

Method of Working.

The easiest piece of weaving is a round mat or basket. For the spokes, cut an even number of pieces—six, eight, or ten—of the coarser canes, measuring in the case of a mat about twice the diameter, and in the case of a basket the diameter, of the base, added

to twice the height of a side, together with from 6 to 12 inches extra for a heading. One additional spoke half the length of the others must be provided.

Cross half the long spokes at right angles over the other half in their exact centres, the upright ones uppermost, and bind together with weaving-cane. For the centres (shown in figs. 462 and 463) hold the spokes firmly in the left hand, and with the right push the end of the weaving-cane in behind the spokes at *b*; bring the weaver diagonally across the front to *c*, behind to *a*, across in front to *d*, behind across to *a*, in front to *b*, behind to *d*, in front to *c*, across behind to *b*, down in front to *d*, behind to *c*, and in front to *a*. This makes a cross bind in a square frame on both sides of the work. The spokes must set flat and not overlap.

Work once round under and over two spokes alternately; take the extra

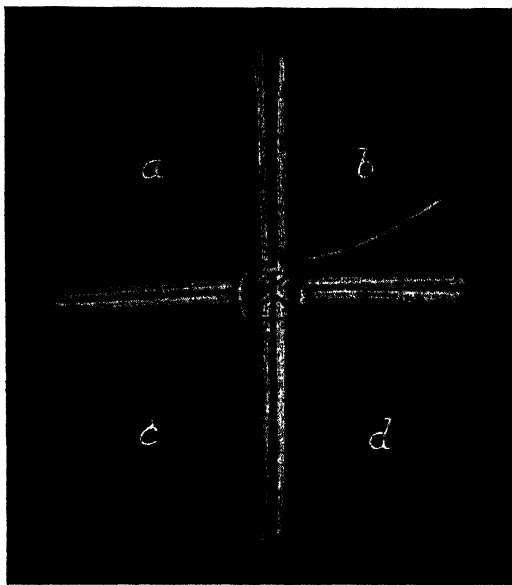


Fig. 462 —Cane Basket-work: Starting a Round Mat.

spoke, and thrust one end into the centre of the weaving at *a*, and proceed to work over and under one strand alternately. Only four spokes are shown in fig. 462 for the sake of clearness, but more are usually necessary. Fig. 463 shows the work in its more advanced stage.

Another and easier beginning is to start the weaver at *a*, and carry it in front to *b*, behind to *d*, before to *c*, and behind to *a*. Repeat this once;

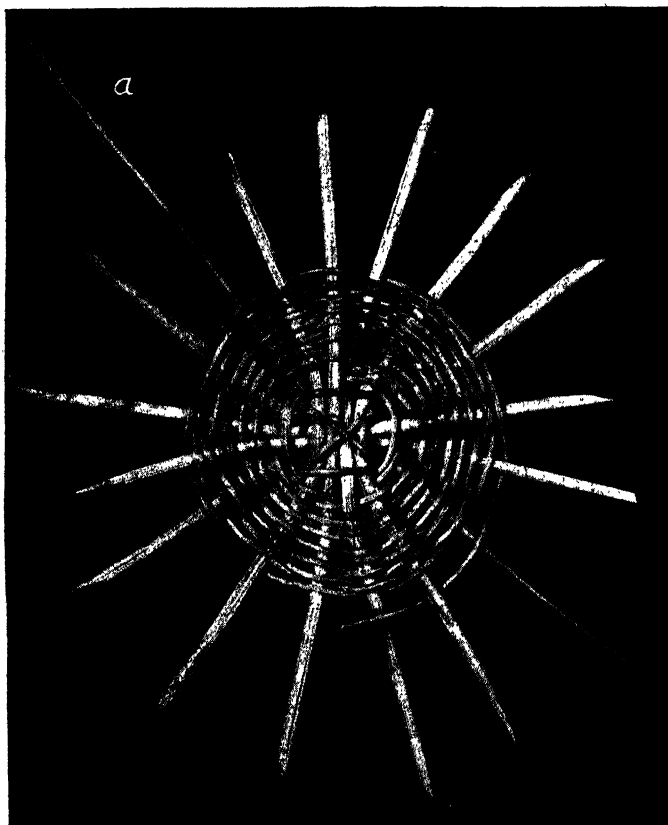


Fig. 463.—Cane Basket-work: Round Mat, later stage.

work once round under and over two, insert the extra spoke, and weave on alternately under and over one spoke only, passing behind in each round the cane passed over in the next, until the circle is of the required size.

All weaving is done from left to right, and in working the spokes should be gradually drawn apart until they are at even distances, as in fig. 463, where *a* represents the extra spoke.

For an oval-basket or mat commence with six, eight, or ten canes for the width, and four or six others considerably longer for the length. Lay the latter parallel, put two of the shorter canes over at right angles to the left of the centre, and fasten with the cross-bind. Lash the weaver three or four times over the long canes, working from left to right, place and

bind in two or more short spokes, and continue till all are thus secured. In the subsequent weaving the spokes should be so separated and fanned out at the ends as finally to be equidistant.

When the base of a basket is formed it should be re-soaked, and the spokes bent up to the shape required for the sides. These may be worked

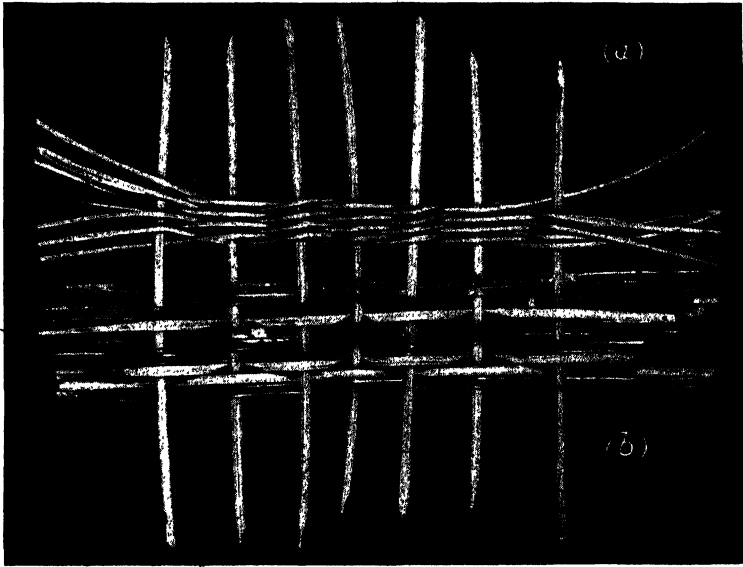


Fig. 464.—*a*, Weaving on even spokes. *b*, Weaving in pairs with flat cane.

in the plain over and under way with a single strand, or with pairs of flat canes used as in fig. 464.

If the extra spoke mentioned above is omitted and an even number of uprights is used, weaving can be done with two canes worked together, one always a spoke in advance of the other.

Another way, illustrated in fig. 464 *a*, is to cross the two weavers, which start from two consecutive spokes, between each pair of uprights.

Twists are used at the lower edge of baskets and at all points where the spoke canes are sharply bent up and need strengthening, or where there are ends to be concealed.

For a threefold twist start weavers from three consecutive spokes, and bring each in succession before two and behind the third spoke from it, on the way laying it over the other two weavers.

In fourfold twist (fig. 465) four weavers are placed behind four

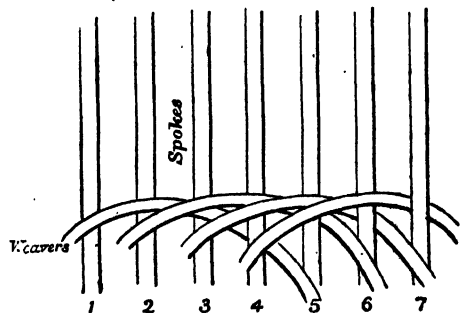


Fig. 465.—Cane Weaving: Fourfold Twist.

consecutive spokes, and each in turn is passed over three spokes, and then brought to the back of the fourth from which it started.

When the basket or mat is finished the spokes should project several inches beyond the weaving. They must then all be cut to the same height, pointed at the end, and used to form a border. The easiest way of doing this is to take each spoke in turn, bend it over, and push it, making a passage for it with the piercer, down beside the first, second, or third spoke

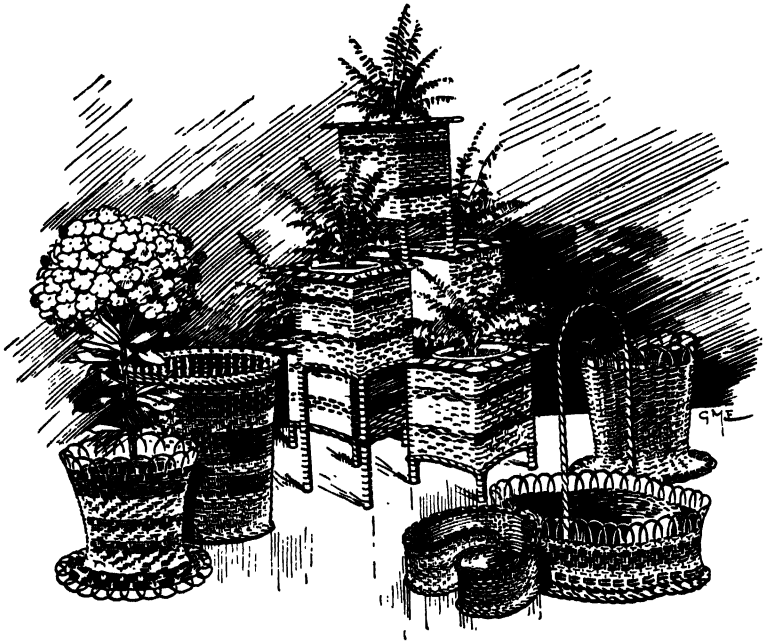


Fig. 466.—Group of Cane Baskets.

beyond it. The ends may be driven quite down or left slack to form a hooped or open edge. Many varieties can be made by interlacing the ends; new spokes are also often introduced and intertwined.

Handles for baskets are made by twisting evenly over a spoke-cane two others, or by plaiting three together. The ends must be thrust down beside the spokes on each side of the basket nearly to its base. When the weaving is completed and thoroughly dry, any ends should be cut away. Some workers singe, varnish, or enamel basket-work, but this is not necessary if fine canes are used.

A group of cane baskets is shown in fig. 466. The pot covers to the extreme right are made in a round wooden foundation pierced with holes to support the uprights until the top of the basket is done. The base is then drawn off, and the extending spokes are bent sharply out and finished with a little weaving and then an open edge. In one example coloured

cane is used. The waste-paper basket is made with coarser canes and rush, and finished with a close border. There is a permanent wooden base, and beyond it a small stand of weaving and then a close edge. The horse-shoe and a large-fluted basket are also on wooden bottoms. The latter has a high, open edge, and rush is introduced into the weaving as well as turned over the handle. The three baskets in the flower-stand are wholly of cane and raffia. The rims are bent out and wide. Here, as in other places where a circle becomes greatly enlarged, it may be advisable to introduce new spokes, one pushed down beside each of those already in position, and all gradually so overwoven that at last they set at equal distances apart.

POKER-WORK.

Tools.—For poker-work or pyrography the best machine to use has a platinum point or pencil which is held in the right hand and made red-hot over the flame of a spirit-lamp. The lamp is then extinguished, and the point maintained at a uniform heat by means of the vapour of benzoline, which is conveyed to it through tubing connected with a ball or bellows worked with the left hand. With this tool writing and drawing, ranging from a few simple strokes to an elaborate landscape or figure subject, can be executed upon any sufficiently smooth wood or leather surface.

Beginners must overcome by practice the tendency to make uneven strokes with dots at intervals, where the pencil is checked for an instant. The smoke, very pungent from some materials, can be diverted by a special "smoke director".

Drawings executed upon wood and other materials are in different tones of sepia-brown, from the faintest shadow caused by mere singeing to deep and heavily dark scores made by longer application from a hotter point. In addition to making lines and curves of equal pressure throughout, the regulation of the heat of the point by means of the bellows must be practised, and the art of making the strokes fine and heavy as required.

Method of Work.—A beginner should attempt a simple pattern, preferably geometric, accurately pencilled on the desired surface. It is better to mark lightly at first, as correct lines can afterwards be deepened and slight errors erased with sand-paper. Heavily burnt marks can only be removed by planing the whole surface.

Any style of design can be executed in pyrography, but the art seems peculiarly appropriate for heraldic patterns, such, for example, as that illustrated in fig. 467. This centre-piece is reproduced from one of a pair of panels measuring 1 foot by 2½ feet. The background is covered with squares formed of parallel lines set at various angles, the pattern being wholly developed by means of lines and dots skilfully graded from the fine work in the minor details to the firm, bold strokes made with a coarser

point in the more important parts. In some examples of the work the background or some feature of the design is powdered with pattern touches, small hollow tubes fitting on to the point and variously formed at the tip so as, when heated, to leave impressions of trefoils, stars, rings, and so on. There are many shapes which can be employed, singly or in combination, arranged in formal but pleasing patterns for backgrounds, fillings,



Fig. 467. —Centre-piece of Poker-work Panel.

and borderings. On a few fanciful articles in burnt wood-work the introduction of colour is permissible, but, as a rule, is best avoided.

When the scorching is completed the wood can, if wished, be varnished, but it looks better if rubbed with French polish or with a preparation specially intended for the purpose.

Best Materials.—The woods chiefly used in pyrography are oak, elm, ash, holly, lime, cedar, sycamore, chestnut, teak, poplar, and what is known as American white wood. They vary in cost and in the depth of colouring they display when burnt. A novice should work first on a piece of board with a flat surface, proceeding to sloping and curved subjects as proficiency increases.

For poker-work there is an abundant choice of articles in the market, ranging from important pieces of furniture to knick-knacks such as book-covers, frames, shelves, cupboards, note-blocks, and match-boxes, costing but

a few pence each. It is a mistake to select from the stock of small dealers; a wholesale catalogue should be consulted, and the order given through an agent. The articles chosen should be of smooth wood free from knots.

Pyrography is applied with good results to leather, bone, ivory, textile fabrics, and also to glass, for which a special point is required. The treatment of these varies only in detail. A caution must be added against working on the many and tempting celluloid articles now obtainable, as the material is highly inflammable.

With care to avoid direct contact between the spirit and a flame no danger need be feared from the benzoline.

MARQUETRY PAINTING.

True marquetry is a kind of inlaying with various woods, the designs being marvellously delicate, considering the nature of the material. Marquetry painting is an imitation of the older art; when well done it can hardly be distinguished from the original.

Kauri pine, sycamore, and other so-called "white woods" form excellent backgrounds. This method of decoration can be applied not only to blotter-covers, caskets, and frames, but also to larger articles, such as furniture, spinning-chairs, chests, table-tops, screens, and trays. The designs vary according to the age and country of the marquetry imitated. Here novices often go astray, putting Dutch patterns on copies of Chippendale furniture, and so on. Such errors can be avoided only by study and experience, or by working from reliable designs. Whether, as is usually the case, musical instruments or arabesque ornamentations are portrayed, it must be remembered that in no case is a raised effect required, so that shading and veining are sparingly introduced.

Materials.—The wood-stains used for marquetry painting are water-colours, scentless and cleanly to handle. Satin-wood, rose-wood, mahogany, walnut, ebony, and olive are among the tints employed, as also are red, blue, and yellow. By combining two or more stains other shades can be obtained, but the entire quantity required should be prepared at once, as a second mixture is seldom exactly similar to the first. The other essentials are: Medium for thinning the stains when necessary, preparing-solution or size for dressing the wood, polish for the completed work, a tube of lamp-black or ivory-black paint, some sand-paper, camel-hair brushes, and paint palettes.

Method of Work.—The surface is first prepared by rubbing in the direction of the grain with sand-paper—No. 1½ for coarser woods such as bass, and No. 1 for the finer kinds like sycamore. All dust must afterwards be lightly blown off. A coat of preparing-solution is applied, and when this is dry a second rubbing with sand-paper is necessary, No. 1 for coarse and No. 0 for delicate woods.

Another coat of the sizing solution is applied, and after it is dry the pattern selected is either pencilled on the wood or else drawn on paper and transferred to it. Errors in designing and in the subsequent colouring can usually be removed by thoroughly rubbing with sand-paper and again applying the solution. The background is first painted with a fine, not over-full brush, worked with the grain of the wood close to the outlines of the design. Then a larger brush is swept over the remaining portions of the surface to be coloured. The work must be even and free from blots and streaks. Being an imitation of naturally-coloured wood, the effect must be as of one slab of the material. Several coats of staining may be needed,

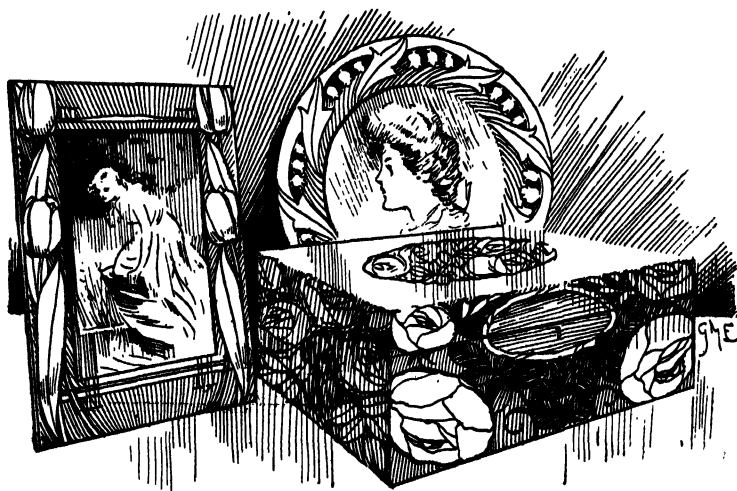


Fig. 408.—Articles decorated with simple Marquetrie.

each being allowed to dry before another is laid over it. The background is usually darker than the design.

When the grounding is dry, the design is begun. A novice should choose as few colours as possible, and test them on a spare piece of the same wood, as the effect of each stain varies according to the surface to which it is applied. All portions of the design to be similarly coloured should be completed and allowed to dry before the parts next them are touched. When the last coat of colouring is dry, hair outlines of black are carried round all details of the pattern. These need a fine brush and a steady hand, as sharpness and evenness are essential to good work.

Finally, the painting, when it is again dry, is treated with French polish or with a special preparation sold for the purpose. Amateurs usually polish with more force than discretion. A light even touch should be cultivated, and the wad or rubber must never rest on the wood, even for an instant. When properly finished the whole surface should shine like a mirror.

READING AND CORRESPONDENCE.

THE MANAGEMENT OF A SMALL LIBRARY.

It is impossible to lay down elaborate rules to guide individuals in the selection of the books which are to constitute their private libraries. The days when Bacon "took all knowledge to be his province" have long since passed away, and most persons are now perforce content "to know something of everything and everything of something", and must consequently be guided in their selection by their individual tastes and occupations.

There are, however, certain classes of books which are of use in every household. Lord Morley, speaking at Arbroath on the subject of free libraries, complained that people "did not follow up the really interesting things which a newspaper suggested. He was amazed that people were content not to know where the places were that they read about, when a man that they read about was born, and where he was born, and what a word meant, when there was in the next room, or in the next street at all events, some dictionary or encyclopædia which would at once tell them all that they ought to know." As it is very inconvenient to be compelled to visit a free library, or other similar institution, whenever any such information is required, it is advisable to keep at hand a few books of reference. In order to obtain information concerning the places which at any time are of particular interest, a good atlas, perhaps also a good gazetteer, is essential. There are several books concerning the celebrities of the day, while the almanacs and other works of the same class furnish information of general interest. A good English dictionary is obviously necessary, and persons who have to read or write in foreign languages will need dictionaries of those languages.

Book-Cases.—For book-cases, deal, pine, or oak is to be preferred, but the wood should be non-resinous in any case. Unless the library consists of only a few books—when fixed shelves are sufficient—movable shelves, which can be adjusted so as to suit the sizes of the books, are the most satisfactory (fig. 469). Pegs are sometimes employed for the purpose, but they are liable to enlarge the holes and drop out. Mr. J. D. Brown of the Clerkenwell Public Library, in his *Handbook of Library Appliances*, states that "the depth of the shelves should be about 9 inches, their length 3 feet, and their thickness, as finished, not less than $\frac{3}{4}$ inch nor more than 1 inch". If the length of the shelves is great they are apt to bend in the middle under the weight placed upon them. The same writer also says that the

surfaces of the shelves in contact with the books should be neither painted nor varnished, but that there is no objection to polishing or staining. Book-cases should not be placed quite against the walls, and should not extend the whole height of the room, as the hot and vitiated air at the top is hurtful to the bindings. If there are many books to be housed in a small space, stacks which have shelves on both sides are very suitable.

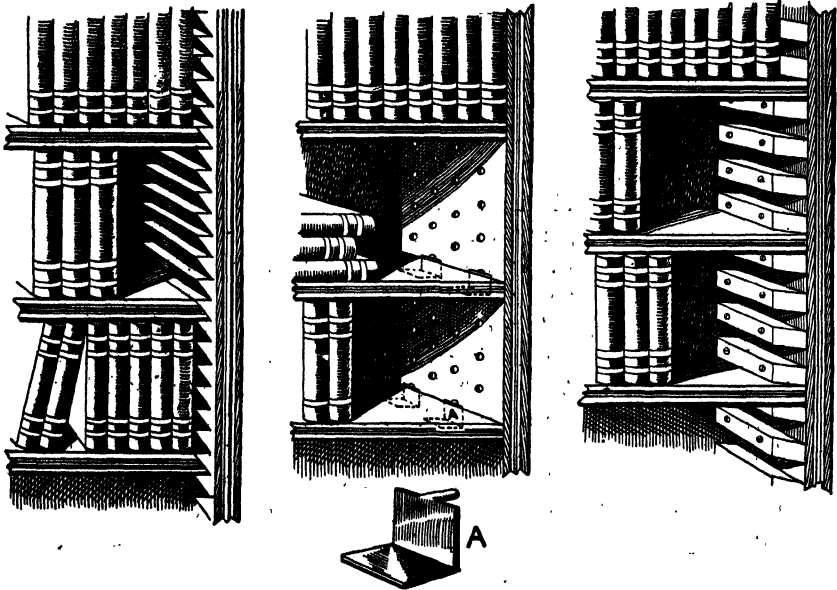


Fig. 469.—Methods of supporting Movable Shelves in Book-cases.

Of course, they are not placed against the walls but in the middle of the room.

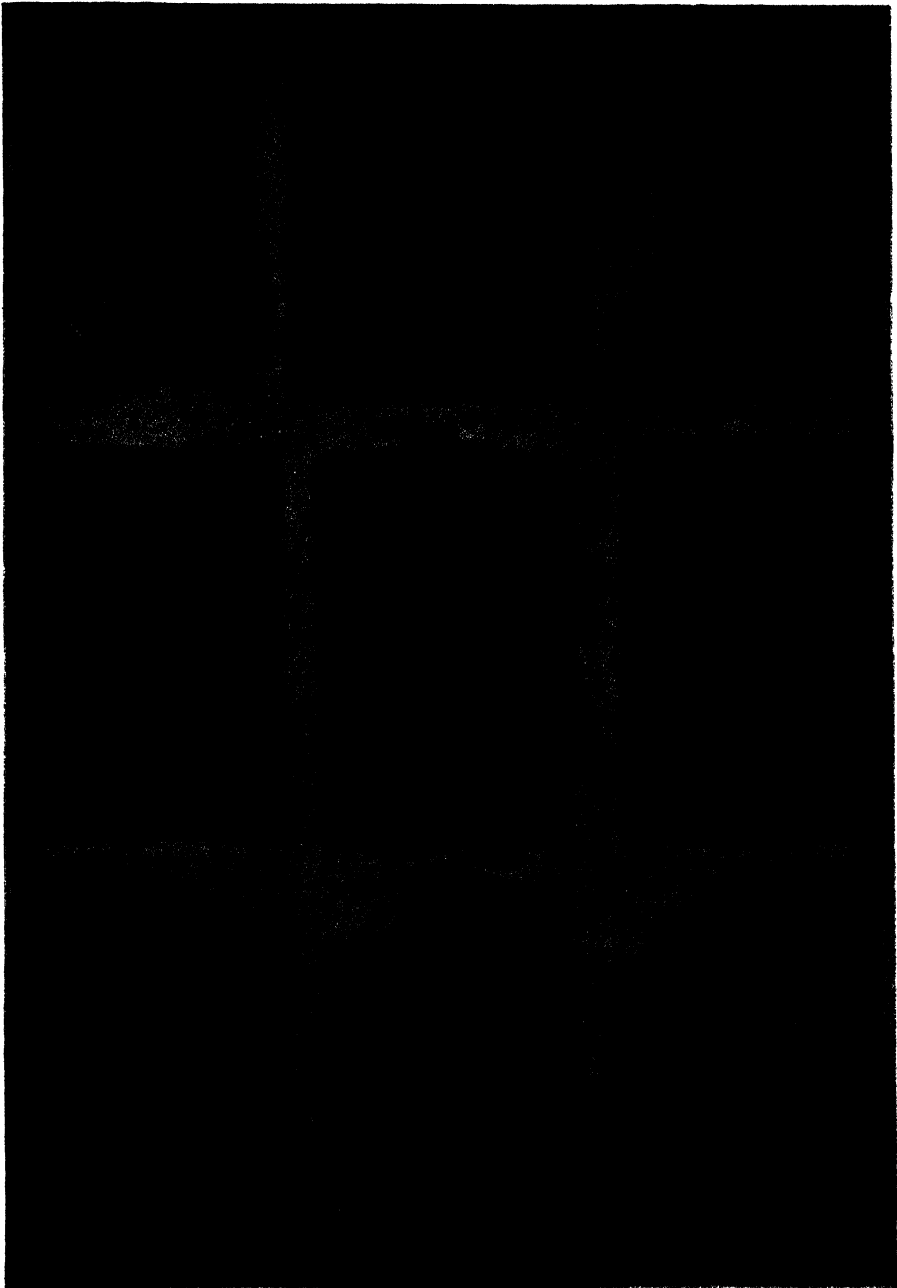
Mr. Blades, in *The Enemies of Books*, says, "It is a mistake also to imagine that keeping the best-bound volumes in a glass-doored book-case is a preservative. The damp air will certainly penetrate, and as the absence of ventilation will assist the formation of mould, the books will be worse off than if they had been placed in open shelves. If security be desirable, by all means abolish the glass and place ornamental brass work in its stead. Like the writers of old cookery books, who stamped special receipts with the testimony of personal experience, I can say *probatum est*."

Rotary book-cases are both ornamental and useful, especially for reference books.

Library Appliances.—Revolving and tilting chairs and book-rests, which hold a book at any height and angle, are luxuries for those who desire the maximum of ease and comfort. Book supports (fig. 470) are necessary for keeping the books upright on the shelves, thus preventing them from falling about and losing their shape. Of these there are several varieties. Current magazines lying on the table should be protected by reading covers; old

BOOK-BINDING

1. Coloured binding with strap-work pattern: brown morocco (book dated 1548).
2. Brown calf binding with English royal arms in centre and crowned Tudor roses in corners (book dated 1540).
3. Black morocco binding inlaid with crimson and yellow—"cottage design" (Bible, 1638).
4. Pale-brown calf binding, "blind-stamped", with small gilt roundels, metal bosses, and clasp (book, Venice, 1474).
5. Book bound for Queen Elizabeth (Venice, 1560), with arms in centre and name *Elisabetta*; red morocco inlaid with red and pale brown morocco, corner designs black on gold.
6. Brown calf binding with *William and Mary* (Lord and Lady Barghley) stamped on covers (book dated 1528).
7. Venetian binding (book dated 1523), citron morocco with geometrical interlacing design enclosing scroll-work and Arabic knots.
8. Binding for German MS. of prayers (date, 1485), brown leather, brass corners, boss in centre, &c.; leather continued at the bottom in a long hanging strip tapering to a point, and finishing with a plated button for attachment to the girdle or chain.
9. Binding done for James I (book dated 1605), olive morocco, corners and roundels in yellow (the royal arms in the centre).



(52)

OLD BINDINGS IN LEATHER

(See description opposite) **NAWAB SALAR JUNG BAHADUR**

numbers should be preserved in boxes for binding. An ivory paper-knife should always be at hand to cut the pages of new books, because careless persons are very apt to use for that purpose the first object, however unsuitable, that comes to hand.

Maps and atlases should be placed in drawers. For keeping loose papers together, cardboard cases, which resemble books and can stand on the shelves (fig. 471), are both neat and useful. Book-trays (fig. 471) for holding a few books and files for newspapers may also be required.

Care of Books.—Damp must be carefully excluded from the library; “it is necessary to avoid having the windows open on a wet day, and above all in the evening”, says the Rev. T. Rogers in his *Manual of Bibliography*.

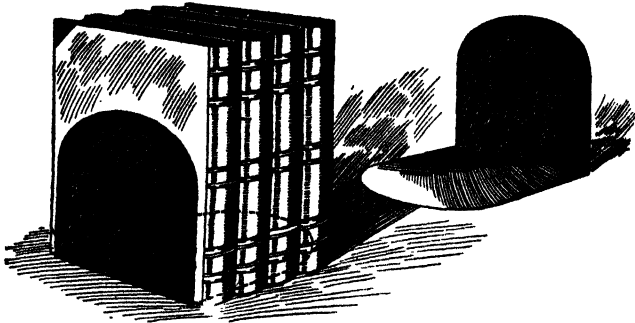


Fig. 470.—Murray's Book Supports.

But in fine weather the fresh air should be admitted freely, and at intervals the books should be dusted and the shelves cleaned. In every case, before a book is opened, the dust on the top should be removed. Mr. Blades recommends “a well-gilt top” as “a great preventative against damage by dust”.

Every new book should be carefully examined page by page, in order to make sure that no plate or sheet is missing, and, if there is any deficiency, a complete copy should be claimed. If, however, it is perfect, evidence of ownership, either by book-plate, stamp, or writing, should be inserted at once. When it is cut, the paper-knife should go right into the fold, otherwise the half-cut leaves will probably be torn. It should never be left open, face downwards. Many persons turn down the leaf to mark the place; to check this objectionable practice, some public libraries issue a small card bookmark with each volume. Lenders of books would do well to follow their example.

Bindings of Books.—For the binding of *éditions de luxe*, French Levant morocco is without a rival. For ordinary books which are much used, half-morocco with cloth sides is the best. Half-pigskin is also very good, and goatskin has its admirers. Imitation Levant morocco has been recommended as a good and cheap substitute for morocco. Russia and calf are generally to be avoided. If the binding is sewn on flexible tapes, the book will lie flat open on the table. For books which are not in much

use, buckram or cloth is sufficient. Where strength in binding is essential, "every sheet", according to Mr. J. Winter Jones, "ought to be stitched round each of the bands, and the covers ought to be fastened by joints".

A list should be kept of all the books, with date of accession, name of bookseller, and price; and when any one is absent for binding or other

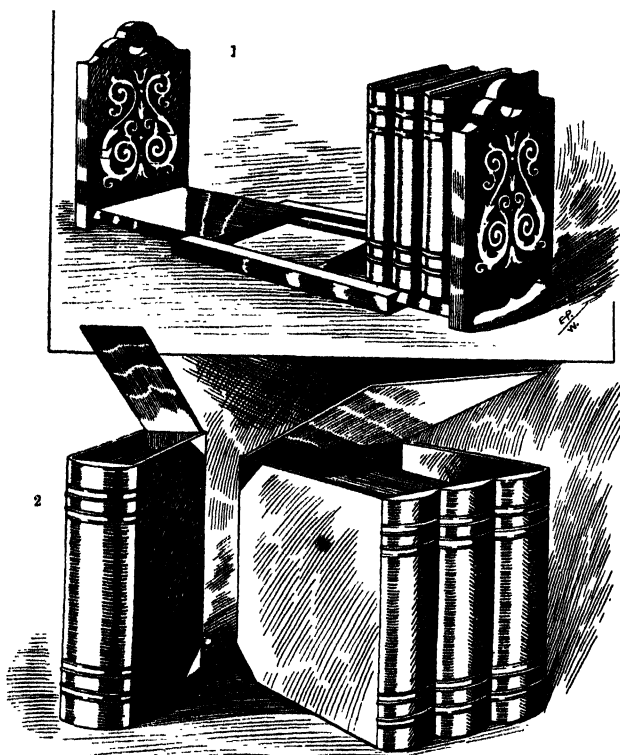
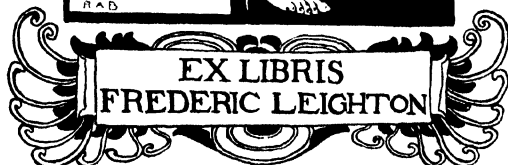


Fig. 471.—1, Book Tray. 2, "Dummy" Books for loose papers.

reasons the fact should be noted in the list or on a card placed in its stead on the shelf.

Purchase of Books.—When books are bought from retail dealers full discount should be demanded unless the price is net. Second-hand books in good condition may often be bought at large lending libraries which publish lists of spare copies. It is well to glance at the catalogues of second-hand dealers, but all orders by post should be on approval.

Book-Clubs.—Book-clubs, which are very popular in the country, are managed as follows:—Twelve families combine, each subscribing, say, a guinea, and selecting a guinea's worth of books. As the whole lot is ordered in one parcel, a considerable discount can usually be obtained. A list of the twelve families is made, each keeps its own books a month, and then passes them on to the next family on the list, receiving in exchange books from the family before it on the list, and so on. At the end of the



(Designed by R. Amos Bell)

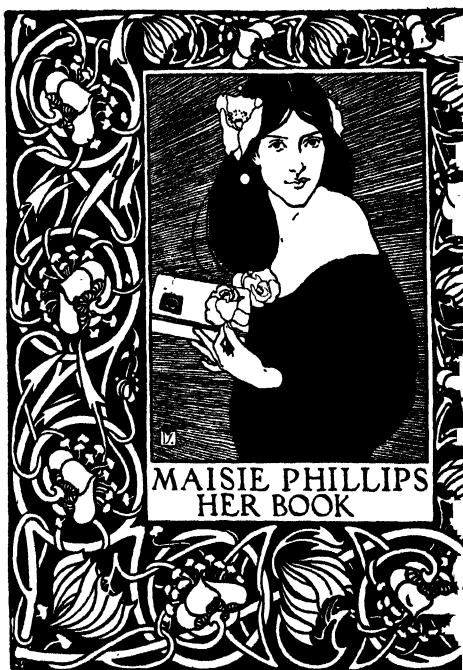


(Designed by J. Walter West)

HORACE SHAW



(Designed by Harold Nelson)



(Designed by Jos. W. Simpson)

4

5

6

year each family has had the advantage of reading twelve guineas' worth of books, and having its own guinea's worth to keep.

CORRESPONDENCE.

The golden rule in correspondence is to answer letters promptly, and then sort and lock up, or destroy.

Letters should be arranged in alphabetical order under either the writer's name or the subject-matter of the correspondence. Thus if John Jones writes about building, his letters may be placed under the heading, "Jones

Fig. 472.—Stamp and Envelope Damper.

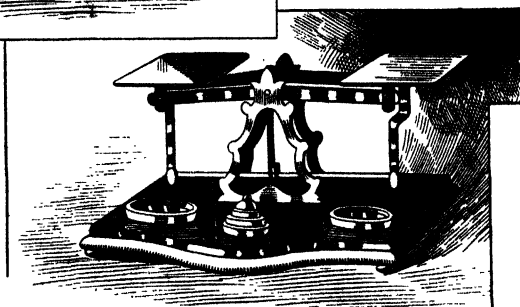
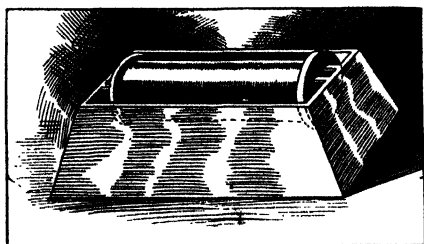
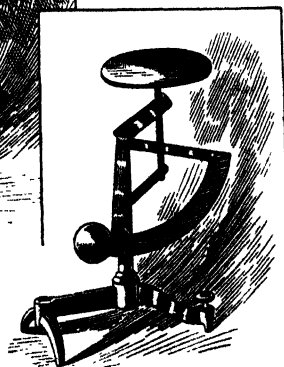


Fig. 473.—Letter Scales.



g. 474.—Letter Balance.

(John)", or under the heading "Building". In such cases it is well to have a cross-reference from the name of the writer to the subject of the correspondence, and *vice versa*. Thus, if the correspondence is sorted according to subject-matter, under the heading "Jones (John)" there should be a memorandum "For correspondence of Jones (J.) upon Building see under the latter heading"; if according to the writers' names, there should be, under "Building", a memorandum, "For correspondence concerning Building see under Jones (J.) and Brown (B.)". By this means the whole correspondence can be found at once when wanted.

When writing a reply it is always well to have the original letter in front of one, otherwise some points are likely to be overlooked. If the matter is important, a rough draft should be made of the reply. This not only ensures accuracy, but also serves as a memorandum, for which purpose, however, a pressed copy is better. A concise statement, though it may take more time to compose than a lengthy one, is much more intelli-

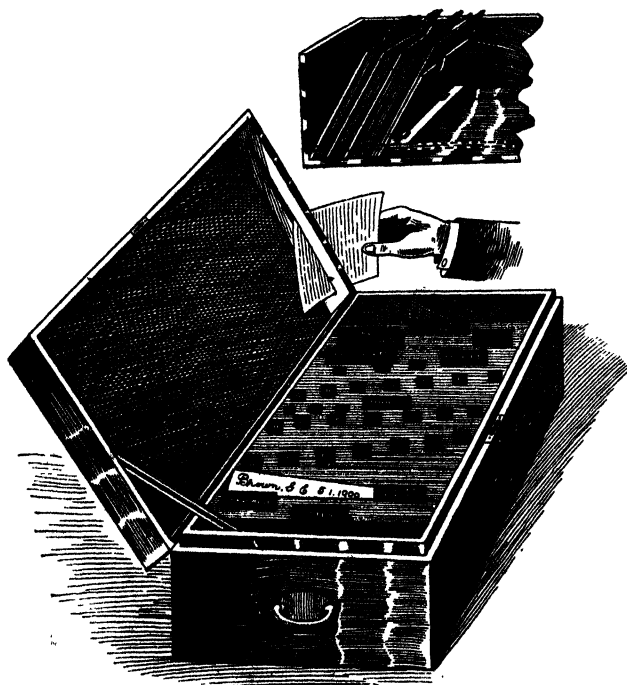


Fig. 475.—Letter-box File with self-fixing Sliding Support. (Ceres Automatic System : T. Bowater Vernon, Patentee.)

gible, and, what is important when one is dealing with a busy correspondent, makes much smaller demand upon the reader's patience.

There are several things which it is useful to have at hand when attending to correspondence. A note-book with the letters of the alphabet cut into it is useful for addresses of correspondents. A spring-balance weighing-machine (fig. 474), which costs a shilling or two, will often save a journey to the post-office to ascertain if a letter is over weight. Care should also be taken that there is always a supply of note-paper and envelopes, stamps, post-cards, telegraph forms, paper-fasteners, scribbling paper for rough drafts of letters and memoranda. Thin opaque envelopes can be obtained for foreign correspondence.

Among optional articles may be mentioned pigeon-hole cabinets, typewriters, manifold-writers, copying apparatus, box files with expanding indexes (fig. 475), calendar desk-pads, letter-clips, paper-cutters, measured rulers, pen trays.

Post-Office Regulations.—The *vade mecum* of everyone with a large or small correspondence should be the *Post-Office Guide*, price 6d., issued quarterly and obtainable at all post-offices and of all postmen in the United Kingdom. It contains exhaustive information concerning such matters as rates of postage (inland and foreign), registration and compensation, poste-restante, express delivery services, money-orders, savings-banks, annuities, telegrams, calendars of the dates of despatch of foreign and colonial mails not made up daily, of the dates of arrival of foreign and colonial mails not due daily, parcel post (foreign and colonial), tables of postage, regulations concerning letters for passengers on board mail packets.

The following items extracted from the *Post Office Guide* are worth remarking:—

“A letter (or newspaper) posted unpaid is chargeable on delivery with double postage; a letter (or newspaper) insufficiently paid, with double the deficiency. The sender is legally liable for the charges.”

“Every newspaper must be so folded as to permit the title to be readily inspected.”

“The postage on a parcel must be prepaid. A parcel should not be posted in a letter-box. It should be marked ‘parcel post’, and presented at the counter of a post-office. The address should be written on the parcel itself, and not merely on a label, which may become detached. It is also desirable that the sender’s address should appear either inside the parcel or on the cover.”

“Letters, halfpenny packets, post-cards, and newspapers are re-transmitted by post without additional charge. In the case of re-direction by the addressee’s agent the correspondence must be reposted not later than the day after delivery (Sundays and public holidays not being counted), and must not previous to re-direction be opened or tampered with. Parcels are, when re-directed, liable to additional postage at the prepaid rate for each re-direction, except when the original and the second address are both within the delivery of the same post-office.”

“Everything intended for registration must be handed to an officer of the post-office, and a certificate of posting, bearing an acknowledgment that the fee for registration and compensation has been paid, must be obtained.”

Under the regulations concerning the express delivery of letters and parcels it should be observed that “Every packet must be handed in over the counter”, and the word “Express” must be boldly and legibly written above the address in the left-hand corner of the cover. Letters to be forwarded by express delivery after transmission by post must have the words “Express Delivery” written above the address on the left-hand side of the cover, which must also be marked “with a broad perpendicular line from top to bottom, both on front and back”.

As a rule telegraph offices in England and Ireland are open on Sundays from 8 a.m. to 10 a.m., and in Scotland from 9 a.m. to 10 a.m.

It must be remembered that, as a general rule, the ordinary charge for

a telegram only covers the cost of delivery within three miles of the terminal office.

"Rural postmen are authorized to sell halfpenny and penny postage stamps and registered letter envelopes."

"In the country it is the duty of rural postmen to accept any kind of correspondence, whether registered or not, handed to them on their rounds. Correspondence handed to a rural postman for delivery at any house which he will pass on his usual route must be fully prepaid in stamps."

"A prepaid telegram may be handed to a rural postman on his way to a telegraph office."

Mode of Addressing Titled Persons.—Full information concerning the modes of addressing persons of hereditary or official rank may be found in *Etiquette for Every Day*, from which the following items are taken:—

King—commence *Sir*, *May it please Your Majesty*; address, "His Most Gracious Majesty King Edward VII".

Queen—commence *Madam*; refer to personally as *Your Majesty*; and address "The Queen's Most Excellent Majesty".

Prince—commence *Sir*; refer to as *Your Royal Highness*; and address, if a prince, "His Royal Highness Prince —", or, if a duke also, "His Royal Highness the Duke of —".

Archbishop—commence *My Lord Archbishop*; refer to personally as *Your Grace*; and address letter to "His Grace the Archbishop of —".

Cardinal—commence *Your Eminence*; refer to as same; address to "His Eminence —".

Bishop—commence *My Lord*; refer to as *Your Lordship*; address to "The Right Rev. The Lord Bishop of —".

Duke—commence *My Lord Duke*; refer to as *Your Grace*; and address to "His Grace the Duke of —".

Marquis—commence *My Lord Marquis*; and refer to as *My Lord* or *Your Lordship*; and address "The Most Noble the Marquis of —".

Earl—commence *My Lord*; refer to as *Your Lordship*; and address to the Rt. Hon. the Earl of —".

Viscount—commence *My Lord*; refer to as *Your Lordship* or *My Lord*; address to "The Rt. Hon. Viscount —".

Baron—commence *My Lord*; refer to personally as *Your Lordship* or *My Lord*; and address letter to "The Rt. Hon. Lord —".

THE SCRAP-BOOK.

In their articles on "Professorships of Books and Reading" in the Special Report on Public Libraries in the United States of America, published in 1876 by the U.S. Department of the Interior, Messrs. W. Mathews and F. B. Perkins recommend that among the duties of such professors should be that of giving instructions as to "how to keep and use commonplace books" and as regards "the practice of making scrap-books". The late Mr. G. A. Sala was credited with a memory capable of bearing the strain of encyclopædic knowledge, but he once modestly confessed that his

command of vast and varied information was due to his practice of keeping carefully-indexed commonplace books.

The practice is one of immense utility, saving time, trouble, and often money. The journalist who has to write off within an hour or two an article on such a subject as quaint epitaphs turns to his commonplace book, finds by means of the index what he wants, and so has no need of ransacking libraries and turning booksellers' shops topsy-turvy in order to obtain the required information. The careful housewife who notes down, in such a manner as will enable her to lay the finger upon it when wanted, any item of useful information which she comes across in her reading will be repaid a hundredfold for her labour. One lady, who spends her summer holiday each year in a different place, keeps a book specially devoted to what she calls "travel-addresses", scraps of information about hotels, boarding-houses, lodgings, interesting scenes and illustrations being collected from various sources and inserted under the names, arranged in alphabetical order, of the towns referred to. The book has proved very useful not only to herself but also to her friends. This is only one of the many ways in which a carefully-kept scrap-book can be utilized.

"Paste" for Scrap-books.—Of materials for pasting in cuttings gum arabic is always ready for use. Paste made of flour is apt to be lumpy, and is therefore inferior to starch; a clove or two should always be added to prevent its turning sour.

To make starch-paste, dissolve the starch in cold water, and then pour in boiling water until the required consistency is obtained, taking care that no lumps remain. Starch spreads best if used warm.

In pasting in a photograph, first carefully arrange it on the page of the album so that it is exactly in the middle, and pencil-mark the page at the corners of the photograph so as to indicate the position it is to occupy. Smear the entire surface of the back of the photograph with paste, as otherwise it will not be even, and place it in position, beginning at the left-hand side, and smoothing it out towards the right.

To remove a photograph pasted in an album, cover it with blotting-paper that has been soaked in warm water. When the paste is sufficiently softened draw the photograph off very slowly, taking care not to tear it.

An album with thick leaves should be chosen for photographs and thin papers. They should be stuck in as soon as the paste is applied, as they have a tendency to curl up. Sheets of blotting-paper should be left between the leaves of the album until they are quite dry, in order to absorb the moisture.

The paste should be applied with a thick or thin brush according as the paper is thick or thin.

In order to prevent the scrap-book from becoming too bulky as the insertions accumulate, cut out alternate leaves; in many scrap-books allowance is made for this.

Indexing.—It is said that Lord Campbell once intended "to bring a bill into parliament to deprive any author who published a book without an

index of the privileges of copyright, and, moreover, to subject him for his offence to a pecuniary penalty". A scrap-book, or commonplace book, no less than many printed books, is almost valueless without an index, which can be made as follows.

Get a supply of scribbling-paper, a strong pair of scissors, a cloth for fixing down slips, some gum or paste, blotting-paper, and some fine paper-files with detachable heads. Strong needles with their blunt ends inserted in corks can be used instead of files. Divide the pages of the scribbling-paper by a fold down the middle, so that the entries may be in two columns. They should be written one under the other on one side of the paper only, sufficient space for cutting up being allowed between them. It is advisable to enter a word several times over rather than to go back and endeavour to find the previous entry. The accompanying diagram will make the process clear.

Post-card, 1.	Asia, 8.
Earth, 1.	Europe, 8.
Sand, 2.	England, 8.
Orb, 2.	Home, 8.
Milk, 2.	Post-card, 10.
Can, 3.	Oxford, 10.
Post-card, 3.	Milton, 10.
Race, 3.	Pangbourne, 10.
Horse, 4.	Post-card, 12.
Sheep, 5.	Ape, 12.
Cow, 6.	Stanley, H. M., 13.
Home, 6.	Gray (Asa), 13.
Africa, 7.	Anne (Queen), 13.

The numbers, of course, refer to the page of the scrap-book on which the various items are mentioned. When the sheets have been cut up into slips as shown by the dotted lines, if several slips relate to the same subject, all the entries may be transferred to a single slip. Thus in the instance given the various references to the word "post-card" may be entered as follows:—

Post-card, 1, 3, 10, 12.

If the slips are very numerous, it is not advisable to sort them into strict alphabetical order at once. First sort them by the initial letter into heaps or into a sorting-box. Then, commencing with A, take them and sort again by the second letter, the first heap being Aa, the second Ab, and so on. Place all the slips in strict alphabetical order, face downwards on the files, from which, when the heads are removed, they can be taken off one by one and pasted in the scrap-book. If the index is not to be a final one, leave space between the entries for additions. Sheets of blotting-paper should be inserted between the leaves of the index-book until the paste is dry. In cases where only a few entries are likely to be made in a scrap-book, the pages may be lettered alphabetically. Thus, under the pages given to B, will be entered "Bread", "Butter", and so on. In this case, however, the entries under each letter cannot easily be kept in strict alphabetical order among themselves.

HOUSEHOLD REPAIRS.

THE FAMILY TOOL-CHEST.

The kind of box in which tools are kept is immaterial, but it must be so large that any tool can be taken out without damage to the others. For this reason a spare room or even a cupboard is far more convenient than any box. One should on no account buy "a box of tools", for it will

certainly contain many that are seldom used, while others more necessary will be omitted, and its contents will almost certainly be of very poor quality. The best tools are to be obtained at shops which sell nothing else, and also at some of the large stores where there is a special tool department.

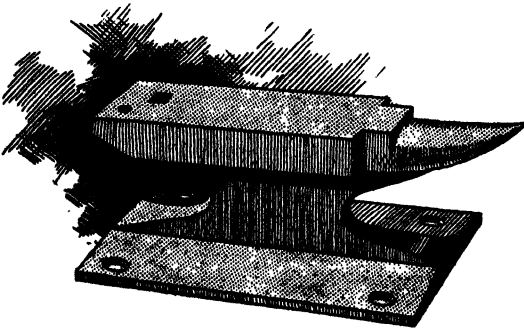


Fig. 476.—Anvil.

If it is inconvenient to buy at one time all that are mentioned in the following list, those of each kind first named should be bought to begin with.

Anvil.—Even when no smith's work is done a small anvil is often very useful. One of about 14 lbs.

weight costs 6*d.* or 7*d.* the lb. A cutter for use on the anvil is invaluable for cutting thick wire or thin iron rod, and costs about 1*s.*

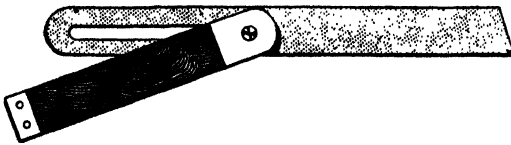


Fig. 477.—Sliding Bevel.

Bevel.—The bevel has a movable blade, which can, by means of a set-screw, be set at any desired angle. It costs much the same as the square, or rather less if the blade is of wood.

Bits.—For boring holes in wood not more than $\frac{1}{4}$ inch in diameter the common twist-bit is best, and a set of six, assorted in size, costs 1*s.* 3*d.*; single bits are about 3*d.* each. For larger holes in wood the "Jennings" bit is very good; it costs from 1*s.* 3*d.* for $\frac{1}{4}$ inch size to 1*s.* 7*d.* for $\frac{1}{2}$ inch size. Cheaper bits called "Shell" or "Nose-and-Spoon" bits cost only 4*d.*

or 6d. each, but as neither has a central point, a beginning must be made with some other tool; after which, however, they work quite well.

Brace.—The most useful brace has “chuck” jaws, which will hold bits of various sizes and shapes without special fitting; it has also a reversible ratchet motion, which much increases its utility; such a brace costs from 5s. to 9s., according to make and finish.

A plain brace, for which each bit must be fitted, and which has no ratchet, but is otherwise quite serviceable, may be bought from 2s. 6d. to 6s. 6d.

Brad-awls.—Of these, three or four, ranging from very fine to coarse, are necessary. They cost from 1½d. to 3d. each with handles.

If an awl pulls out of the handle, drive a plug of wood into the hole, and make a new hole in the plug with another brad-awl, not with a gimlet; hold the awl in the vice, or between the claws of the claw-hammer, and

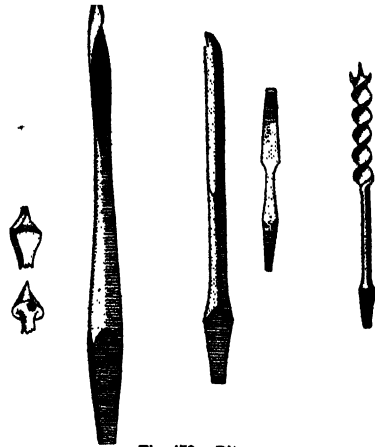


Fig. 478.—Bits.

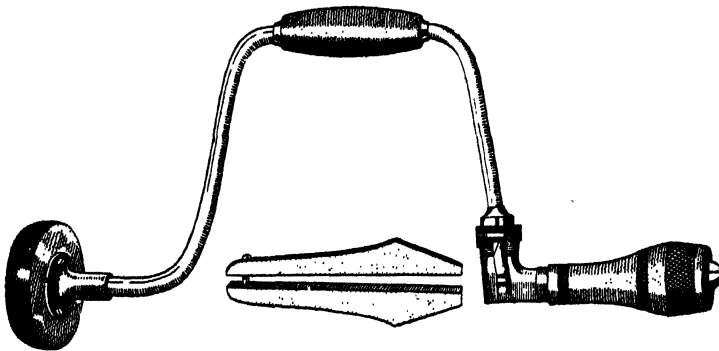


Fig. 479.—Brace.

drive the handle on again. A brad-awl forces apart the fibres of the wood without taking away any of the material, so that a very tight hold is obtained on a brad or screw driven into the hole; it is therefore the best means of making a screw-hole in soft wood, but in hard wood a tool that removes some of the substance should be employed.

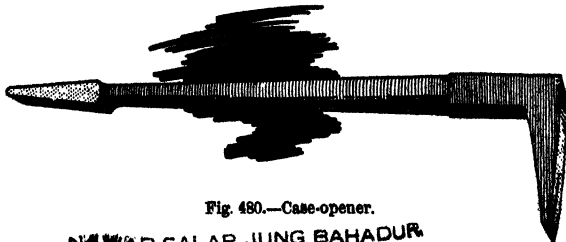


Fig. 480.—Case-opener.

NAWAB SALAR JUNG BAHADUR

Case-opener.—This is a short lever with one end like a cold-chisel or

wedge, and a claw at the other. It is the best tool for opening boxes and similar purposes. Its cost is 1s. to 3s.

Centre-punch.—This is used with the hammer to make a dent in metal as a guide to the drill, which would otherwise be difficult to start on the right spot. A punch costs 4d. or 5d.

Chalk-line and Reel.—A very long mark is made by a cord rubbed with chalk or other colouring matter. The line is fixed at one end and stretched tightly along the place where the mark is to be; it is then raised near the middle and allowed to snap down, making a straight and clear mark. Line and reel cost only a few pence.

Chisels.—Chisels for ordinary use are known as “firmer chisels”. The most convenient sizes are 1 inch, $\frac{1}{2}$ inch, and $\frac{1}{4}$ inch, costing, with handles,

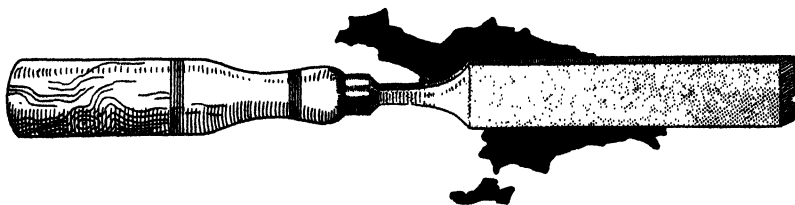


Fig. 481.—Chisel.

9½d., 6½d., and 5½d. each, respectively. Mortise-chisels are thicker and heavier than “firmer chisels”. They are used for cutting a mortise or deep slot in thick timber. One $\frac{1}{4}$ inch wide, costing 1s. to 1s. 6d., will suffice for many sizes of mortise. Chisels of all sorts are sharpened in the same way as plane-irons.

Cold-chisel.—This is a chisel made entirely of steel, for cutting cold metal. It should be $\frac{5}{8}$ inch wide and 7 inches long, and cost about 9d. A second one, rather longer, but with narrower edge, is useful for cutting plug-holes in brick walls when fixing a heavy bracket or an overmantel.

Compasses.—The legs of compasses should be at least 7 inches long. The cost, with wing or quadrant, is from 1s. 3d. to 2s.

Drills for metal.—Twist-drills are the best,

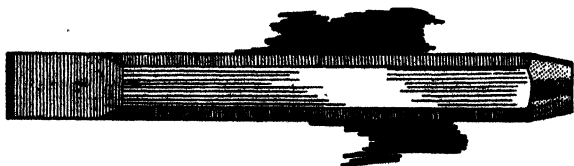


Fig. 482.—Cold-chisel.

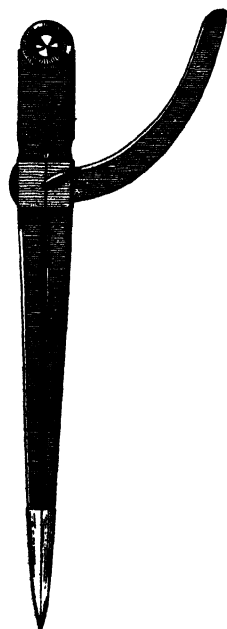


Fig. 483.—Wing Compasses.

costing: $\frac{1}{8}$ inch, 8d.; $\frac{1}{4}$ inch, 1s. 3d.; $\frac{3}{8}$ inch, 1s. 11d., the last being the largest that can well be used in the hand-brace. But in metal up to, say $\frac{1}{8}$ inch thick

a small drill-hole may be enlarged to $\frac{1}{2}$ inch with the "rimer", a tapering bit, square or half-round, which costs 5*d.* or 6*d.* For holes less than $\frac{1}{2}$ inch in metal or hard wood the Archimedeian drill-stock is good, but the hand drill-stock (fig. 484) is better. The former costs about 2*s.*, and the latter 5*s.* 6*d.*, and either should have a "chuck" to hold drills of several sizes. The small drills for these cost from 1*d.* to 4*d.* each.

Drills are sharpened on the oil-stone or with an emery-wheel, and they cut only when revolving from left to right.

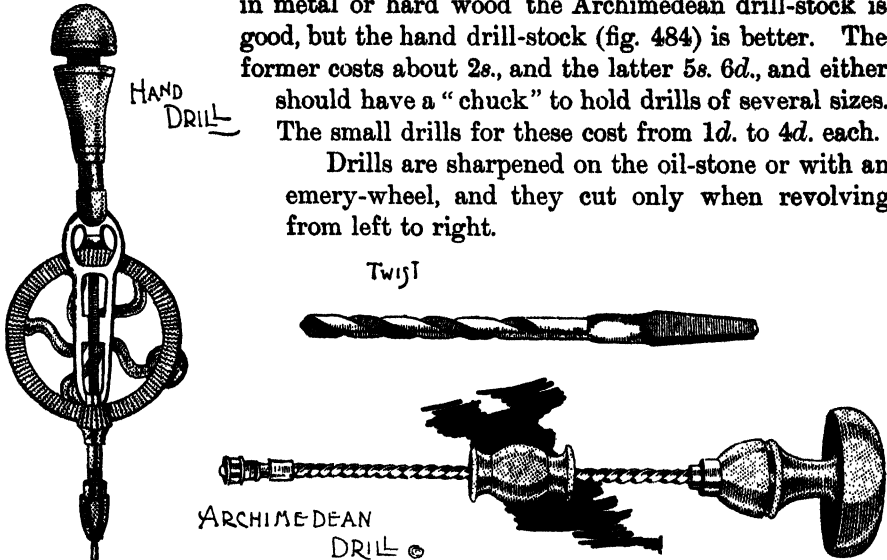


Fig. 484.—Drills.

Files.—The most useful files are the half-round taper, bastard-cut, 8 inches long; the flat, second cut, 7 inches long, with one "safe edge", i.e.

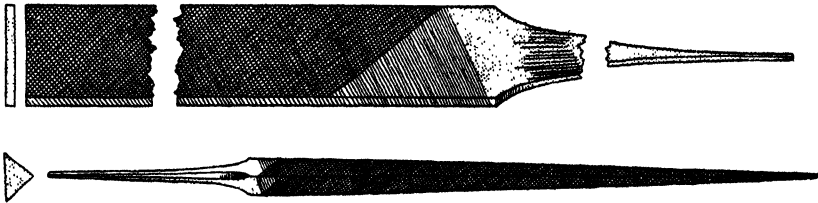


Fig. 485.—Bastard-cut File and Three-square File.

a smooth edge that will not cut downwards or inwards when the side is being used; the half-round taper, smooth, 7 inches long; the three-square, second cut, 7 inches long; and a couple of round tapering files, second cut, 7 inches and 4 inches long respectively. All files cost, roughly speaking, 1*d.* an inch in length, without handles.

Gauges.—The marking-gauge saves much time when many pieces of wood have to be marked at a uniform distance from the edge, but a true edge must be made to each piece for the gauge to run along. A good enough one may be bought for 6*d.*

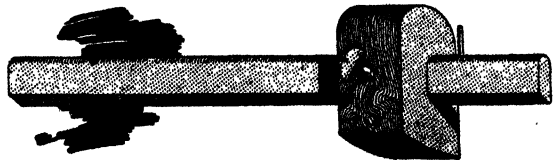


Fig. 486.—Marking-gauge.

The mortise-gauge is used when two parallel lines, at any desired distance from the edge and from each other, are required. It costs from 2s. 6d. upwards.

Gimlets.—Three or four gimlets of varying sizes are required, the twist pattern being the best. They cost 3d. or 4d. each with wooden handles, but a good set of six, all fitting into one solid brass handle, is to be obtained for 2s., and this is recommended.

Glue-pot and Glue.—There are two pots, the inner one to contain the glue and the outer for water. A cast-iron glue-pot of convenient size may be bought for 1s. 6d. or 2s.; copper pots are much more expensive, and the iron pot is quite satisfactory. The glue should be broken small, put into the inner vessel, and covered with cold water, in which it must soak for a night. The unabsorbed water is then nearly all poured off, and the pot, the outer vessel being half-full of cold water, is placed where it will become heated gradually. Occasional stirring assists the melting of the glue. Scotch glue, which costs 6d. or 8d. the pound, is the best. A thin coating of glue, very hot, is applied with a thin piece of wood or a brush to both of the surfaces to be joined. The work is then screwed up with cramps, or otherwise held tightly together, and left for a night for the glue to cool and harden.

Gouges.—Two gouges, ground on the outside of the curve, of 1 inch and $\frac{3}{8}$ inch width, respectively, should be bought; they cost a trifle more than

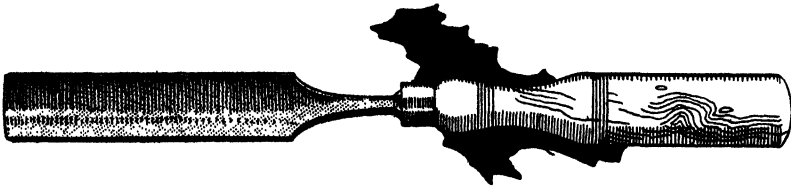


Fig. 487.—Gouge.

chisels of the same sizes. One ground inside the curve, $\frac{3}{4}$ inch wide and costing 10d., is often useful. Gouges are sharpened like chisels, except that for the inside of the curve a small rounded stone, called a slip, is used.

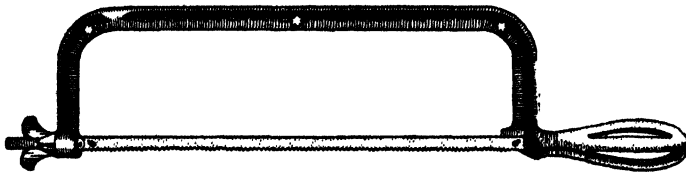


Fig. 488.—Hack-saw.

The slip is held in the hand and rubbed on the tool, not the tool on the slip. This stone may be bought for about 1s.

Hacking-knife.—This is for removing old putty from the window-frame. It costs from 7d. to 1s.

Hack-saw.—This is used for cutting metals. The best is the "Star" saw, the price of which, with cast-iron bow 9 inches long, is 2s. 3d.,

including one blade. Blades alone cost 3*d.* each. They are made in two degrees of coarseness, the finer being the more useful.

Hammers.—Of these, two are indispensable; one, a large claw-hammer, of which class the “adze-eye” is the best; the striking-face and the inner side of the claws must be steel-faced; a good weight is 1½ lb., and the

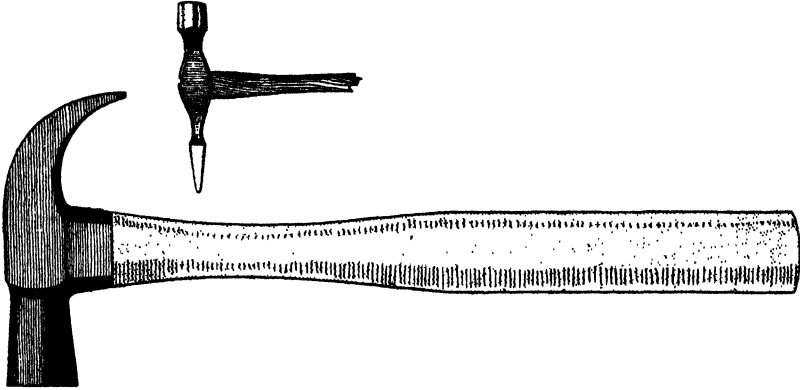


Fig. 489.—Claw-hammer and Light Hammer-head.

price ranges from 2*s.* 6*d.* to 3*s.* 6*d.* The second hammer, for tack-driving and other light work, should have, instead of the claw, a thin flat end which can pass between the finger and thumb to give the tack a preliminary tap to make it stand up in the wood; the hammer is then reversed and the round end used to drive the tack home. A good tack-hammer costs about 1*s.*

Hatchet.—The American pattern with narrow head is best, as in it the weight is more concentrated than in the English form. A convenient size weighs about 1½ lb., including the handle, and costs 2*s.* 6*d.* or 3*s.*

In using the hatchet let the weight to a great extent control the blow, for if excess of force is applied the aim is apt to be spoilt and a cut made in the wrong place.

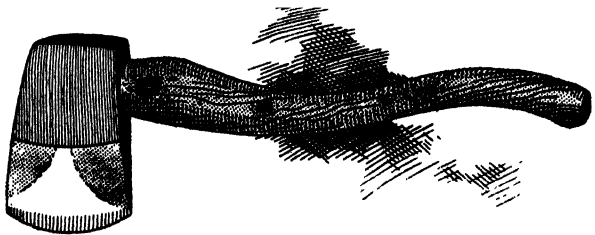


Fig. 490.—American Hatchet.

Mallet.—A joiner's mallet costs from 1*s.* to 1*s.* 4*d.*, but an old croquet mallet with a short handle does just as well.

Materials.—Wood should be bought at a timber-yard, where it can generally be had cut into lengths and planed according to the purchaser's requirements; but for the labour and time employed in preparing it the charge will probably exceed the value of the timber, if the latter is bought in stock sizes and in the rough.

Nail-punches.—A large and a small one, costing 3*d.* to 6*d.* each, will be required.

To hold any punch, do not take it between finger and thumb, but place the thumb, little finger, and middle finger on the side of the tool next to the body, the first and third fingers being on the further side. The punch is then held securely, and in such a manner that it will not slip when struck with the hammer.

Nails.—Of the many sorts of nails only one or two will be required by the amateur. Cut nails must be driven with the long way of the head in line with the grain of the wood, for, the stem of the nail being wedge-shaped in one direction, it will split the wood if not placed correctly.

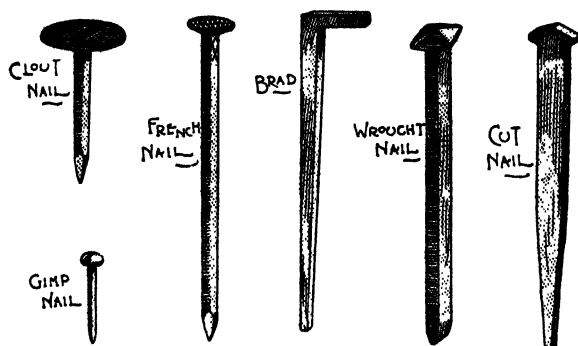


FIG. 491.

Occasionally a nail twists round while it is being driven, in which case it may be turned back to its right position by means of the claw on the hammer.

Wrought nails are broader and flatter than cut nails, and are driven with the width of the shank across the grain of the wood. Brads, like cut nails, are cut from cold

rods of iron. They have a projection on one side only instead of a head, and are used to fasten on mouldings and to nail down floor-boards, or in other places where great holding-power is not required. Brads must also be driven with the heads in line with the grain of the wood to avoid splitting.

French nails are made from wire, either round, square, or oval; they are not so apt to split the wood, as their shanks are parallel, but they do not hold so well as cut or wrought nails.

Clout nails have short shanks and very broad flat heads. They are used for holding down roofing-felt, and in similar work, where a small head would break through the material.

Gimp-pins are made of iron or brass, and may be had in several different colours to match various materials. They are used for fastening the "gimp" or ornamental trimming round the edges of upholstered work; though, where possible, it is better to sew this on with needle and thread.

Brass-headed nails, with stems and heads of iron in one piece, and merely a thin casing of brass over the head, are better than those with solid brass heads. A hollow-headed punch, or a piece of hard wood should be used to receive the direct blow of the hammer, so as not to deface the head of the nail.

Oil-cans.—One of these should contain pure olive oil for use on the oil-stone; and another, of different shape, should be kept for lubricating-oil such as is sold for cycles or sewing-machines. Suitable cans may be had from 1d. upwards. Before oiling, wash away any old oil with a little

paraffin, then put on a few drops of the lubricant, and wipe off any superfluous oil, which would only collect dust.

Oil-stone.—The Washita stone is as good as any, and does not cost so much as the Turkey or Arkansas stone. A convenient size is $2\frac{1}{4}$ inches wide and 8 inches long, the price of which, in a case, is about 3s. or 3s. 6d.

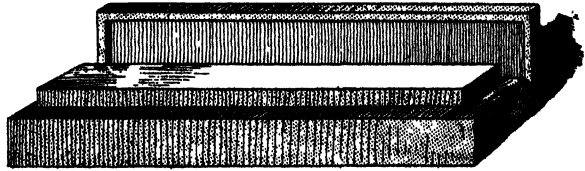


Fig. 492.—Washita Oil-stone.

In using the oil-stone it should be wiped clean, and a few drops of pure olive oil put on it. The left hand holds the tool down on the stone, while the right pushes it along and regulates the angle at which it is ground; the same angle must be maintained throughout, or a curve instead of a bevel will be produced. The actual grinding or sharpening is all done with the forward stroke, so the tool should not be pressed on to the stone during the backward motion.

Pincers.—In using this tool take a grip so firm that it cannot slip, and use the bend of the jaws as a fulcrum, the handles forming a lever. The best make is the Lancashire; the length should be at least 8 inches, and the price about 2s. There are cheaper pincers made, but the jaws of these soon become damaged and fail to hold securely.

Planes.—A jack-plane for removing the rough surface from sawn timber, or for quickly reducing the thickness of the wood; the price from 4s. to 5s. according to width of iron, which should not be less than $2\frac{1}{8}$ inches. A smoothing-plane, for finishing the work, costs about 1s. less than a jack-plane; the iron should be at least 2 inches wide. Both planes should have double irons; the longer one does the cutting, while the shorter, or break-iron, causes the shavings to curl upwards and come clear out of the plane. In the jack-plane the end of the break-iron should be about $\frac{1}{4}$ inch from the edge of the cutter, and in the smoothing-plane considerably nearer.

If the iron does not project sufficiently from the sole of the plane, hit its upper end lightly with the hammer; if it projects too far, and cuts too thick a shaving, a blow on the top of the plane near the front end will cause the iron to recede, after which the wedge must be tightened. In doing so great force must not be used, or the small projections against which the wedge presses will be split off. To release the irons in order to sharpen the cutter hit the top of the plane near the fore end hard, until the wedge is loose.

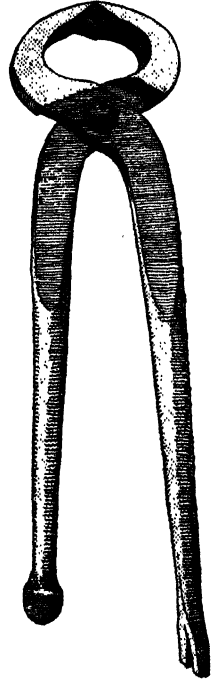


Fig. 493.—Pincers (Lancashire pattern).

The tool-maker charges only 1*d.* or 2*d.* for grinding, and when this has been done the sharpening is finished on the oil-stone (see page 217).

In using the plane the right hand pushes the tool along and guides it, while the left is mainly employed in holding it down to the work, and

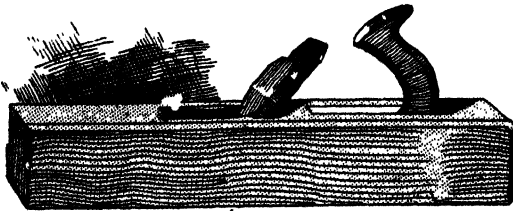


Fig. 494. — Jack-plane.

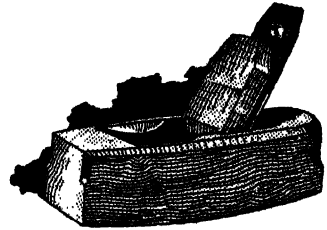


Fig. 495. — Smoothing-plane.

for this reason it should be placed just above, or slightly forward of the cutting edge, the right hand being behind the iron, the forearm nearly level, and as low down as possible. A little tallow or oil rubbed over the sole makes the work much easier, especially if the wood is resinous.

A common plane with cast-iron stock is useful for rough work out of doors, where the good smoothing-plane is likely to be damaged, but the cost is nearly as much as that of the wood-bodied tool of better quality.

Pliers.—Bell-pliers 7 inches long cost about 2*s.* 9*d.* They have cutters at the side, and some have also a nick behind the joint for cutting thick wire. A second pair, 4 inches long, with flat jaws and without cutters, costing 1*s.*, is also required. Round-nosed pliers for bending wire in curved or circular form cost the same as ordinary pliers of similar size.

Gas-pliers have jaws something like pincers, but ribbed inside. They should be adapted for holding objects of several different sizes. The length should be at least 8 or 9 inches, and the cost from 1*s.* 9*d.* to 2*s.*

Putty-knife.—The shape known as the “clipped point” is best; one of medium size costs 10*d.*

Rasp.—The rasp is used for shaping wood too uneven in the grain to be worked with the cutting tools, or when the form of the work renders plane or spoke-shave useless. The best shape is “half round”, and one 8 inches long costs about 9*d.*

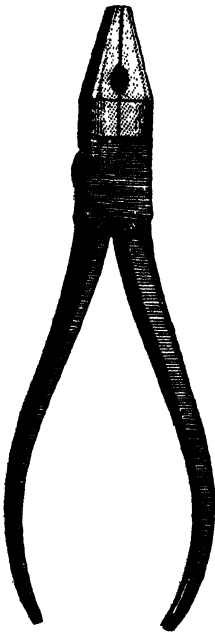


Fig. 496. — Combination Pliers.

Saws.—A hand-saw, 26 inches long, costing about 5*s.*; and a tenon-saw, thinner, and with finer teeth than the hand-saw, and having a stiff back, which keeps the blade from bending; length, 14 inches; price, 4*s.* to 5*s.* 6*d.* A key-hole saw, which has a very narrow blade for cutting round curves; price from 6*d.* to 1*s.* 4*d.* complete, the blades alone being 3*d.* or 4*d.* each.

When using any saw remember that it should cut almost with its own weight, the use of force adds little to the speed, and generally results in a crooked cut and a jammed saw; this caution applies especially to the key-hole saw, which easily bends and breaks when hot, if not held quite

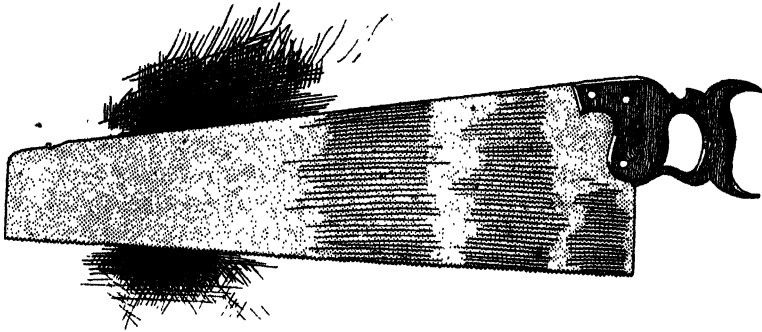


Fig. 497.—Hand-saw.

straight. Before making the cut, mark a line exactly where the saw is to go, for it is much more difficult to cut straight just beside a line than right along it. Stand so that an eye can see each side of the blade, for in that way the tool will be held straight, and the cut will be true. If the saw gets

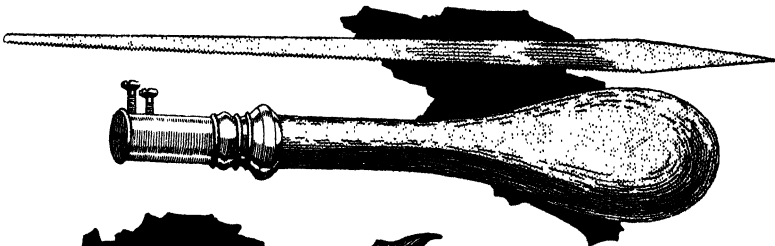


Fig. 498.—Keyhole Saw.

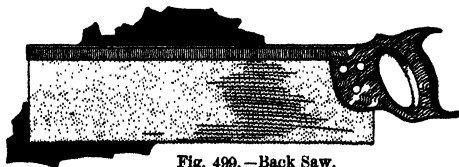


Fig. 499.—Back Saw.

off the line, do not try to twist it back into the straight, but mark a fresh line and begin again, even if that means wasting a piece of wood. Saws used in the hand are sharpened with a file; but this is not easy to do, and the usual charge in a good tool-shop for sharpening and setting is only 4*d.* "Setting" consists in bending the teeth to right and left alternately, but this operation should not be attempted by a novice, for an inexperienced worker is almost certain to break off several of the teeth. The reason for setting is to make the cut a little wider than the thickness of the saw-blade, so that the latter may move freely.

Screw-drivers.—For large screws the London pattern is best; it should be 10 inches or 11 inches long, including the handle, and costs 1*s.* 6*d.* or 2*s.*

For medium screws a thin round one, with a 6-inch blade, costing 1s. or 1s. 4d., is handiest. A brad-awl may be used for very small screws.

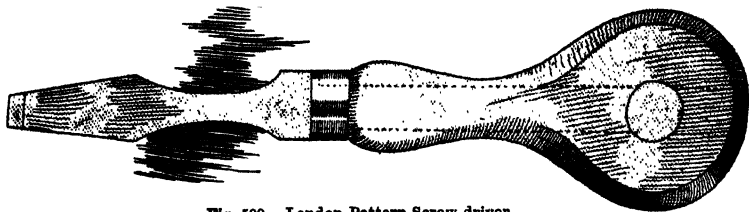


Fig. 500.—London Pattern Screw-driver.

Screws.—Screws are much more economically purchased in large than in small quantities. For example, a single dozen of small iron screws can seldom be obtained for less than 2d., whereas a gross of screws 1 inch long and No. 7 size costs only 6d. or 7d. Those most frequently in use are $\frac{1}{2}$ inch, Nos. 6 and 8; $\frac{3}{4}$ inch, Nos. 6 and 7; and 1 inch, Nos. 6 and 7, in iron; and $\frac{5}{8}$ inch, No. 6, in brass. Brass screws cost from two to three times as much as iron.

Snips, or Tinmen's Shears.—This tool is required for cutting sheet-

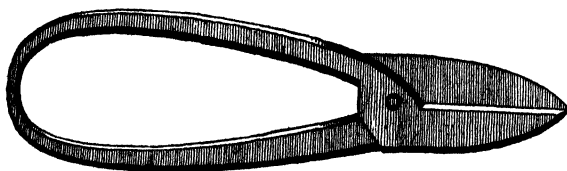


Fig. 501.—Tin Snips.

metal, such as a tin patch for mending a water-can. The Lancashire make, 7 inches long, costs 1s. 10d.

Soldering-fluid.—A tinsmith uses "killed" spirits or muriatic acid, the energy of which has been expended on scraps of zinc, dropped in one by one until the acid ceases to boil. This fluid is very corrosive, and rusts any iron or steel in its vicinity; but there are several fluxes sold in 6d. bottles which are said to be non-corrosive and to emit no unpleasant fumes.

Soldering-iron.—The larger the copper of a soldering-iron the longer will it retain the heat, but one of 12 or 14 ounces is as heavy as can be



Fig. 502.—Soldering-iron.

easily handled, and costs about 2s. 6d. A second, of half the weight and cost, is convenient for small work.

Spirit-level.—A level, having a second tube in the end, for use as a plumb or upright, costs 2s. or 2s. 6d.

Spoke-shave.—A spoke-shave having a $2\frac{1}{2}$ -inch blade with screw adjustment and brassplated costs about 1s. 2d., while one with $1\frac{1}{2}$ -inch iron costs 10d.

A very good shave with steel stock and detachable wooden handles costs about 3s.; this is a most useful tool, as either handle can be removed when working in a confined space, and it is adapted for very small curves.

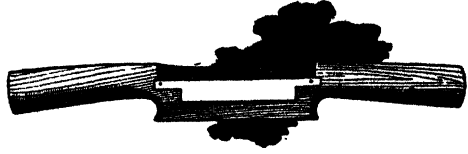


Fig. 503.—Spoke-shave.

Squares.—The try-square should have a 9-inch steel blade. A fairly good one costs from 2s. to 2s. 6d.

The mitre-square is similar to the try-square, except that the blade is set at half a right-angle—or 45 degrees—with the stock. Its cost is about that of the try-square. When many mitre-joints are to be made, a mitre-

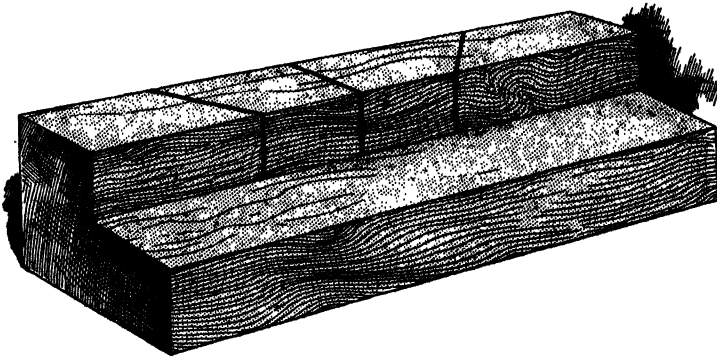


Fig. 504.—Mitre-block.

block is used. In this are two cuts which form guides for the saw, and by its aid much time is saved, for each cut need not be marked out with the mitre-square. The block, if made of beech, costs 1s., but one can easily be made at home. However, as it cannot in every case take the place of the mitre-square, the latter should be included in the collection of tools.

Tack-raiser.—For taking up carpets and for similar purposes a small claw set in a wooden handle is the right thing to use. The claw is curved

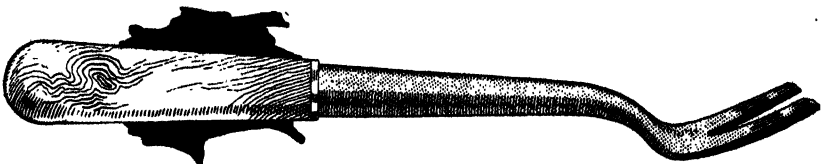


Fig. 505.—Tack-raiser.

so that the bend forms a fulcrum, and the handle a lever; it is pushed under the carpet and the handle depressed, thus loosening the tack. The curve of the claw must not be more acute than in fig. 505, or the claw will not easily

be pushed under the tack. This tool costs about 1s. There is a tack-lifter which grips the tack above the carpet, but this pulls off the head, and is not to be recommended.

Tool Handles.—No file, and indeed no other tool, should ever be used without a handle. File-handles quite good enough for the purpose may be purchased for 10d. the dozen; those for chisels from 1s. 6d. the dozen, and for screw-drivers at about $\frac{1}{2}$ d. per inch in length each.

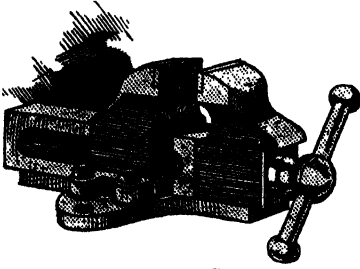


Fig. 506.—Vice.

Trowel.—For odd jobs with cement a small bricklayer's trowel, costing 2s. or 2s. 6d., is very convenient; but for such work in very confined places the putty-knife may be used.

Vice.—There are many things for which a vice is necessary, such as using the file or the hack-saw. The best kind screws to the top of the bench or other stand, and has jaws which are always parallel. One with jaws $3\frac{1}{4}$ inches long weighs 19 lbs., and costs 13s. It will stand a good deal of rough usage.

Wrench, or Screw-spanner.—A third name for this is the shifting-spanner, for it is adjustable for turning nuts of various sizes. One 10 inches or 12 inches long costing 2s. or 2s. 6d.; and a second, such as is used for cycles, costing at least 2s., will do all the work required in the house.

THE REPAIR OF FURNITURE.

To Mend a Broken Chair-leg.—When the leg of a chair breaks it almost always gives way where one of the cross-bars enters it, and where, in consequence, it is weakest. It is useless to glue together the severed ends, for they are usually broken off "like a carrot", so a new piece must be supplied. The material should be beech, or other hard, close-grained wood, 3 inches longer than the piece broken off. The hole for the cross rail is made 3 inches from the top of the new piece, the spare length being cut to a slope and planed smooth, as in fig. 507. The upper part of the leg is also cut in a similar manner, but sloping in the opposite direction, so that when the two pieces are brought together they form a continuous "stick". The two long surfaces thus obtained afford a good hold for a glued joint, and additional strength is given by screws put in from opposite sides of the leg. They should enter first the thinner parts of the sloping pieces, penetrating into the thicker afterwards. The chair must be set aside until the glue is quite hard, when the joint may be smoothed with sand-paper. The screw-heads, which should be counter-sunk a little below the surface, are then covered with plaster-of-Paris. Putty is not good for this purpose, as it shrinks when drying. When the plaster, which sets very quickly, is

hard, the new wood may be painted or stained and polished to match the rest of the chair.

Castors.—When putting new castors on a chair or other piece of furniture, if the screw-holes are worn too large, or if an old screw is broken in the wood, new holes must be bored. If this is impossible, the old holes must be plugged with wooden pegs dipped into hot glue, and when the glue is hard the ends of the pegs must be trimmed off and holes made in the pegs. If the leg is so riddled with holes that it will not bear plugging, a new foot must be supplied in the same manner as the new end to the leg described above, but in this case, as the article is probably heavy and the strain great, the joint or splice must be $3\frac{1}{2}$ inches or 4 inches long, and more screws must be used.

To Re-seat a Chair.—In a cane-seated chair this operation is not difficult if a whole chair is taken as a guide. First, clear away the débris of the old seat, punching out from the under-side the pegs which wedge the canes into the holes, then insert the new canes, first those running in one direction, and then the cross canes interlacing them. When driving in the pegs pull down the loops of cane which cover them as each one is hammered in. If it is not essential that the chair should match others having cane seats, an easier and more speedy repair is effected by using one of the perforated wood seats which are sold at the ironmongers' and oil-shops for 3*d.* or 4*d.* each. They are very strong, being made of three thin layers of wood glued together, the middle one placed with the grain at right angles to that of the upper and under layers. A seat of this kind will outlast many cane seats, and cannot become baggy. It is cut to the right size and shape with a fine-toothed saw, and after the old seat has been cleared away is fastened down with brass screws; a couple of coats of "hard-drying" varnish completes the job.

In the case of a stuffed seat in which the webbing supports have given way, the entire seat must be taken off and new webbing nailed on with small clout nails or large tacks. The webbing is sold by ironmongers and cord-dealers at 1*s.* 2*d.* to 1*s.* 9*d.*, according to width, per piece of 18 yards; it should be well stretched, and should be nailed on before it is cut as the long end can be held more firmly and pulled harder than a short piece. The crossing pieces should be interlaced to give greater strength and elasticity.

If the stuffing has become hard and matted it should be well pulled apart, or if the local upholsterer will pass it through his carding-machine, so much the better. A new piece of Hessian or sacking is then put on the seat, and the inner cover, also of Hessian, is fastened on, leaving 3 or 4 inches loose at the centre of the back.

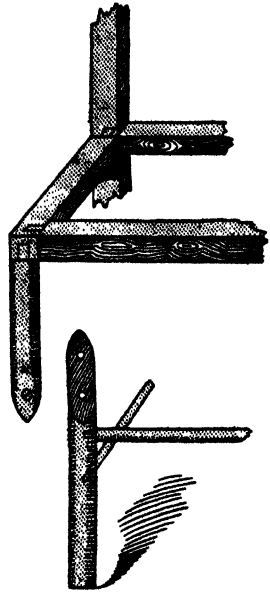


Fig. 507.—Splice in Chair-leg.

The stuffing is put in, a little at a time, through this opening, and guided to its place by a cane having a forked cut at the end. After it has been all replaced, any small lumps are smoothed away by means of an awl or a very strong needle, thrust through the top of the seat and used as a lever to push the hair into the desired place. Any further padding for which there is still room may then be inserted and the sacking nailed down. Finally the outer covering is put on, gimp or cord being fastened round the edges to complete the work.

THE REPAIR OF DOOR FURNITURE.

Locks and Keys.—When a lock refuses to work do not use force; the application of a poker or anything else used as a lever may break, but will not open, the lock. If the lock is accessible, it should be taken off and examined. Frequently it is only stiff with clogged oil and dust, which a little paraffin will remove; in this case, after it has been cleaned, all the parts which rub together must be touched with a little good lubricating oil. The key should also be oiled. Superfluous oil should be wiped off, as it will only hold the dust and make the lock work stiffly. When a door-lock will not latch the cause is usually a broken spring.

In order to take off a mortise lock, which fits into a recess in the edge of the door, remove the key and one handle, and also the small bolt-knob if there is one, and take out the screws visible in the edge of the door, and any others beneath the thin brass plate which is thus released. The lock should then be drawn towards the edge by means of the spindle which passes through it, and when the second handle and spindle have been removed the lock may be pulled out with the fingers.

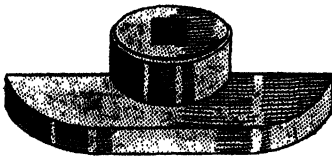


Fig. 508.—Part of Mechanism of Door-lock.

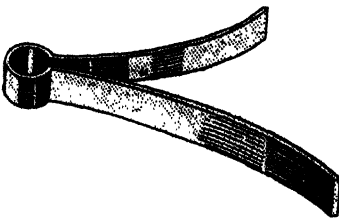


Fig. 509.—Spring of Door-lock.

If the two screws in one side of the lock are withdrawn, the side-plate will come off, revealing the working parts. The broken pieces of the spring will be found inside the lock, and a new one, costing 1d. or 2d., must be obtained from the ironmonger or locksmith, the old fragments being used as a guide to the size. The bend of the spring fits over a pin standing up in the lock-case as it lies on its side; one leg of the spring presses against the end of the case, and the

other against a piece of metal, shaped as in fig. 508, and having a square hole through which passes the spindle to which the handles are attached.

When the new spring is in position, the side-plate is laid loosely on, and is pushed into its proper place by means of the spindle. The plate can

then be screwed on and the lock reinserted in the door. A lock fastened to the side of a door is removed by taking out the handles and spindle and the screws which hold it to the door; it is then dealt with in the same way as the mortise lock.

Door-handles.—There are so many different methods of fastening door-handles that it is impossible here to describe any but the commonest of all, in which the handle is secured to the spindle by means of a screw passing through its side. This screw, as well as the hole through which it enters, becomes worn in course of time; the screw then falls out, and the handle comes off. A new screw, thicker than the first, will keep the handle on for a while, or a piece of string tied round the handle, and fitting into the nick of the old screw-head, will form a temporary make-shift. It is generally more satisfactory, however, to get a new handle and screw; the cost is only a few pence, unless the handle is very ornamental.

THE REPAIR OF WINDOW-FITTINGS.

Window-sash Lines.—In windows with two sashes which slide up and down in the frame the sashes are maintained at any desired height by means of counterbalancing weights, moving within a pocket at each side of the frame. These weights are attached to the sashes by cords or lines running over pulleys inserted in the frame near the top. For very heavy sashes the lines are sometimes made of chain, or of closely-coiled strips of copper; for those of moderate size plaited "sash-line" is used. An ordinary twisted cord is not strong enough. When a line gives way, unless from some accidental cause, it is a sign that all those of the same age are becoming weak, and require immediate renewal. Even if no worse damage is done, the glass is almost certain to break if the sash falls suddenly through the failure of the supporting cords.

If the upper sash is to be re-corded, both sashes must be taken out of the frame; but if the lower one only is to be repaired, the upper one need not be disturbed. The "beads", or slips of wood at the sides of the frame, which prevent the lower sash from falling into the room, are first removed by forcing a strong screw-driver between the bead and the solid part of the frame, and using it as a lever. If this is done about midway up, the bead may be bent and pulled out, with the nails which hold it. The lower sash should be pushed right down, and the cords nailed temporarily to the side of the window-frame a few inches beneath the pulleys.

If found to be in good condition they should now be unfastened from the sash by removing the nails which hold them; but when new ones are to be put in they may be cut through, and the sash lifted out so that the old nails and ends may be cleared away.

When new cords are required for the lower sash, a string is tied to the

loose end of the old cord, the temporary nail is then removed, and the weight allowed to run gently to the bottom of the pocket, the other end of the string is tied to the new cord to allow of its being pulled through the hole in the side of the frame, and so down to the bottom of the pocket. Between the two sashes is a very narrow bead of wood, which fits tightly



Fig. 510.—Lower part of Window-sash and broken Sash-line.

into a deep groove in the side of the frame, and is not, or should not be, fastened in any other way; this bead must now be pulled out carefully to avoid breaking it, when the lower end of the "pocket-piece" will be seen a few inches from the bottom of the frame. The pocket-piece is a loose part of the frame, which may be removed, to give access to the weights, by inserting into a small hole at one end a small screw-driver or similar implement and so prising it out. The weight may then be lifted out, bringing with it the old cord, the string, and the end of the new cord. The new line is fastened to the weight in the same way as the old one, care being taken that no loose end or knot projects which might cause the weight to stick, and prevent its free passage up and down the pocket. When the weights have been restored to their places the pocket-pieces and second beads are put

back. While the cord is loose it is well to take out the pulleys at the top of the frame, and oil them, as this cannot be done satisfactorily while they are in position.

To ascertain the length of cord required for either sash, measure the distance from the top of the sash concerned to the point to which the old cord reached. This will be from 7 to 10 inches, according to the size of the sash. Then pull the cord so as to bring the weight to the top of the pocket, securing it temporarily in that position by a nail driven through the cord into the frame, and cut off the cord the required number of inches below the top of the sash when it is pushed down to the bottom of the frame. The heads of the clout-nails with which the cords are fastened to the sash must be driven well below the surface, so that they may not scrape against the side of the frame when the sash is moved. The fastening of the cords to the sash is the only really difficult part of the work. If possible, an assistant should hold the sash while the nails are being driven in, but it

can be done by one man if the sash is propped up on a block of wood or an empty box about 6 inches high. When the cords are secure, the nails holding them temporarily may be removed, and the sash slid into position.

In order to rehang the upper sash, take out the lower one and the inner beads, as already described; the upper one may then be dismounted in the same manner. The weights for the top sash come out of the same pocket-hole as those of the lower, which must be removed first. They should be distinct, however, as there is often a difference in the weights of the two sashes, and consequently, in the counterpoises.

Between the two weights there is a thin lath which prevents them from catching against each other. This lath is fastened at the top only, and care must be taken not to break it. The new cords for the upper sash must be put in before those of the lower one, as the weights of the latter would be in the way if fixed first. After nailing the lines to the upper sash, run it up into its place and insert those for the lower one, but do not attach them to their sash until the pocket-pieces and second beads have been replaced. To refix the beads which hold the lower sash into the frame, cut off the nails close to the wood, for if driven out they would make unsightly marks. Fasten the bead with five or six new nails with small heads, or with brass screws, which are more easily removed if the sash has to be taken out again. While fixing the beads press them gently against the sash, so that they will prevent it from rattling, but not so close that it can only be moved with difficulty.

Flax sash-line costs 9d. or 10d. per piece of 12 yards. Before using it uncoil the cord and fasten one end to some fixed object, such as a tree or a railing, and pull as hard as possible so as to stretch the cord well. If this is not done it will, after a little use, become so slack that the weights will not support the sashes.

Draughts.—Badly fitting doors or windows are best rendered wind-proof by strips of felt held in place by wooden beading; rubber draught-stopping is not so good, for it soon becomes hard and inelastic.

Felt stopping is sold in 6-foot lengths at about 10d. the length, but it is rather unnecessarily expensive, and old felt, useless for anything else, is all that can be desired. Suitable wood beading may be had from $\frac{1}{2}$ d. a foot, and may be stained and varnished, or painted to match the other wood-work. For the draught under a door by far the best cure is a roller, working in slots so that it may rise over the carpet or mat when the door is open, falling to the floor again when it is closed. This roller costs 2s. 6d. for 3 feet length, 2s. 9d. for 3 feet 6 inches, 3s. 3d. for 4 feet, and 3s. 6d. for 4 feet 6 inches.

Rattling Windows.—Windows that rattle may be silenced by wedging the sashes together, but a better remedy is a pair of rubber wheels fastened to the window-frame by screws through their centres, so that they revolve when the sash is moved, and always keep it silent. They have the additional advantages that they are always in position, they need not be removed when the window is opened or shut, and they cannot be mislaid and so

necessitate a nocturnal hunt for a substitute. These wheels cost 3*d.* or 4*d.* the pair.

Venetian Blinds.—The cords by which the blinds are raised or lowered pass over grooved wheels or pulleys fixed in the thick board at the top, and then down through holes in the laths, and are prevented from returning by knots tied at their ends. When the slots in which the pulleys run become widened through wear, the pulleys can “wobble”, so that the cord sometimes jumps off and is jammed between the pulley and the side of the slot. When this occurs, remove the screws which fasten the blind to the top of the window-frame or to brackets, and take down the blind and release the cord. In order to prevent a recurrence of the accident, screw a narrow piece of wood, or a piece of tin doubled over, to the upper side of the board on each side of the pulley, so that, while it can revolve freely, it cannot move sideways. If a pulley should be chipped, causing the cord to slip out of the groove, a new one should be inserted by punching in one end of the wire on which the pulley revolves until the other end can be grasped by the pliers and pulled straight out far enough to release the old wheel. The new pulley can then be put in and the wire pivot driven back again. A dozen pulleys may be bought for a few pence at the ironmonger’s.

When renewing the tapes, use those known as “woven-ladder” tapes, in which the cross-pieces supporting the laths are woven into the uprights. They are made in various colours, but some shades, especially red, fade so rapidly under the strong sunlight to which the blind is exposed that it is best always to use the string-coloured tape which is more frequently seen than any other. The price depends much upon the colour, ranging from 2½*d.* to 4*d.* the yard, a whole piece of 72 yards being charged at a lower rate. The width of the laths governs the distance between the cross-tapes. If this is too great the laths will not overlap sufficiently to exclude the light.

When fixing new tapes, do not take the blind down bodily, but begin by removing the tacks from the lowest lath, and cut off the knots on the ends of the cords. Pull the cords up through the laths, but not through the board at the top containing the pulleys, and let them hang down outside the blind. Slide the laths out and then unfasten the old tapes from the top board; nail on the new tapes at the top, taking care not to cover the hole through which the cord passes; put back the laths and run the cords through again in such a way that the cross-tapes are alternately to left and right of them. When the bottom lath is passed tie knots on the cords and nail the tape to the under-side of the last lath, and the work is completed.

MISCELLANEOUS REPAIRS.

Water Taps.—In the old-fashioned tap, which opens and closes by a quarter-turn of the handle, there is a central plug having a hole through it. When this is turned so that the hole is in line with the pipe the water

flows, the supply ceasing when the plug is turned back to the first position. In course of time this plug becomes worn and the tap no longer controls the water. In such cases it cannot be satisfactorily repaired; a new one should be fitted.

In the modern "screw-down valve" there is also a central piece, called the "plunger", which is moved vertically by means of the screw, so that its end closes the orifice through which the water comes. This plunger has a loose revolving end, to which is attached a washer or "valve-seating" of india-rubber or other yielding material. For cold water the washer is generally made of rubber and canvas, but for hot water something that will stand a high temperature must be employed, and the best is a composition known as "woodite". The washer, being softer than the metal of which the tap is made, wears out comparatively soon, but it is very easily renewed, after which the tap is as good as ever.

The upper part of the tap, containing the handle, with the plunger attached, is removable, but there is usually a small screw in the side which prevents it from becoming unscrewed accidentally, and this screw must first be taken out. Screw-down valves are frequently made with a left-hand screw. If the upper part does not move when turned in one direction the other should be tried, the large screw-wrench being used with only moderate force, or damage may be done to the tap. The washer is sometimes attached to the plunger-end by a screw through its centre, at others by a cap screwing over the end of the plunger-foot.

The plunger works through a "stuffing-box", or chamber, filled with cotton or tow-packing pressed round the shank of the plunger by means of a nut which screws down into the box. This nut occasionally works loose and causes leakage, but a turn or two with the wrench will make it tight again. This must be done with care, or the plunger will be packed so tight that it cannot be turned easily, in which case the nut must be slackened a little. If the packing is worn away, the nut must be screwed right up, and some cotton or tow, saturated with tallow, not oil, wound tightly round the stem of the plunger until there is just room for the nut to enter the thread in the side of the stuffing-box.

Before the tap is taken to pieces the water must, of course, be cut off. When the tap is supplied direct from the main pipe, the stop-cock outside the house must be closed; when the supply comes from a cistern, it should be cut off there; and if there is no stop-cock just outside the cistern, an old

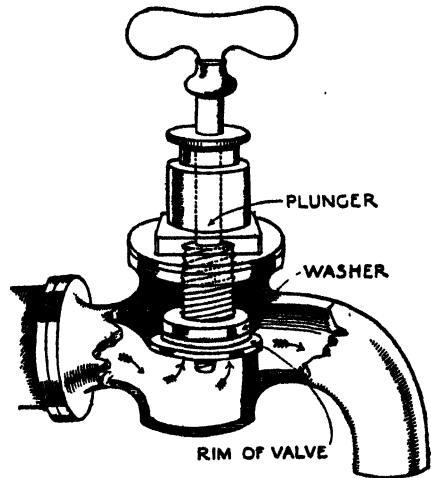


Fig. 511.—Screw-down Valve Water-tap.
The arrows indicate direction of flow of water.

broom-handle may be cut to a blunt point, so that it will enter the pipe inside the cistern. Wrap a piece of rag round the end of the stick, drive it, without great force, into the pipe, and after the dead-water has been drawn off, the tap may be taken to pieces. The broom-stick may also be used with advantage to stop the flow of water through a pipe burst by the frost, or damaged in any other way.

In the case of a hot-water tap supplied from a high-pressure boiler, the water can only be cut off by means of the stop-cock outside the hot-water cistern. Hot-water apparatus, however, is dangerous to meddle with when not fully understood, and in this case the tap had better be attended to by a competent plumber or engineer.

Ball-cocks.—When a ball-cock leaks, the water must be cut off, and the plunger fitted with a new washer, as in the case of the screw-down valve. The plunger is sometimes held in by a pin passing through a "lug" or projection underneath the pipe in which it works, while in other cases a screw-cap retains it in position. In small cisterns, such as the "waste-preventer", or flushing-tank in the water-closet, the stem of the ball sometimes gets bent, so that the ball rubs against the interior of the tank, and cannot move freely, thus failing to shut off the water when the cistern is full. In this case the rod must be straightened.

Electric Bells.—The electric current, by which the bell is caused to ring, is generated in a battery consisting of one or more cells or jars containing the elements zinc and carbon, the former usually in the form of a rod with a copper wire at its upper end, to which one of the conducting wires is fastened; the latter either loose, in a porous earthenware cylinder, or as a block surrounded by two rubber bands to keep it apart from the zinc. The carbon is provided with a "binding screw", to which the second conducting wire is attached. Crushed sal-ammoniac, about $\frac{1}{4}$ lb. to a quart cell, is put into the jar, which is then nearly filled with water. The rim of the jar is wiped dry, and thinly coated with oil or some other greasy substance, such as vaseline, to prevent the saline solution from creeping over the edge, and so making a moist and acid deposit on the outside of the jar and its surroundings. The Leclanché cell, as this is called, after its inventor, is the most suitable for bell work.

In a battery of several cells the zinc in one is connected with the carbon in the next, leaving a zinc terminal free at one extremity, and a carbon at the other, for the attachment of the wires which conduct the current. For an average house of ten or twelve rooms a battery of two quart cells provides ample power. If the metal wire from the battery comes into actual contact with any other earth-connected metal, such as a gas-pipe, leakage of the current may occur. The conductor must therefore be insulated, *i.e.* completely covered with some material (such as india-rubber) which is a non-conductor of electricity.

The bell consists of a gong, a hammer, and an electro-magnet; a simple form of the last being a bar of iron surrounded by a coil of insulated wire. When the current passes through the coil, the iron bar becomes magnetized

and attracts the hammer, which in turn strikes the gong. The current is then automatically cut off, upon which the hammer is drawn back by a spring, and the circuit is again completed; and so on until the battery is "run down".

The circuit must therefore be so constructed that it is complete only when the bell is to ring; and for this purpose the "push" is employed in the following manner. At any convenient spot the conducting-wire is

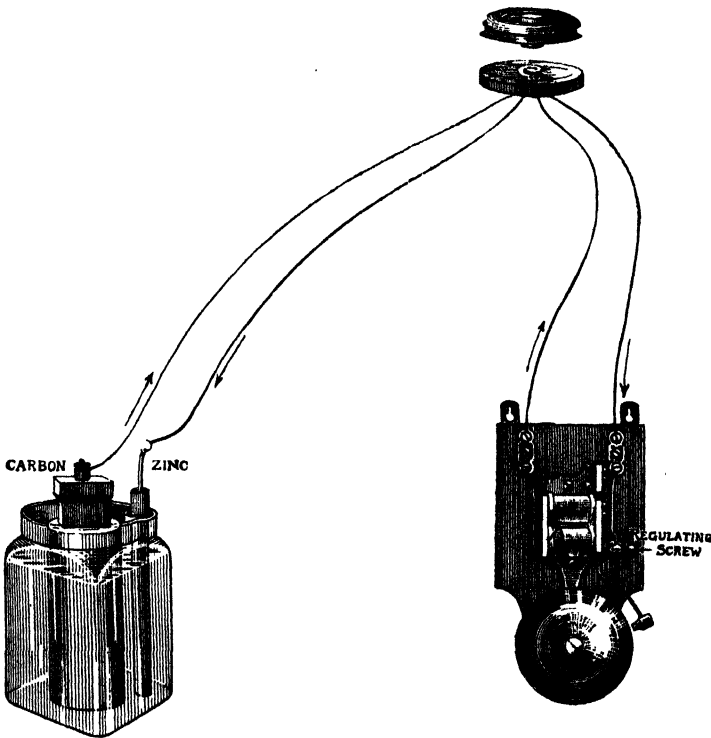


Fig. 512.—Electric Bell Apparatus.

severed, and the "broken" ends are attached to two pieces of brass inside the push. One of these lies flat at the bottom of the push-case, and the other springs up towards the cover of the case. When the push-button is pressed, this second piece of brass is made to touch the first piece, completing the circuit, and causing the bell to ring; and when the button is released the springy piece of brass flies up, breaking the circuit, and the bell is silent.

The battery should be covered to keep off dust, and it should be placed in a cool place, so that the water may not evaporate quickly. It, however, requires filling up with water occasionally, but beyond this it should not need attention more frequently than about every eighteen months. After being in use for this period it becomes weak, and the bell sounds more and more feebly, until at last it is altogether silent. The battery should then

be revived by putting fresh sal-ammoniac into each cell and filling up with water. If the zinc is nearly all eaten away, it should be taken out and scraped bright, or renewed. Zinc rods cost 3d. or 4d. each.

If the bell does not ring, and the battery is known to be sufficiently powerful, there is probably some leakage of the current, or a fault in the conductor. The wires must be examined to see that the insulation is perfect. All joints should be scraped bright; and the connections should be remade as tightly as possible. If the bell still does not sound, the small screw controlling the bar to which the hammer is attached may require adjusting. To do this, unscrew the cover of the push and insert a halfpenny, or any piece of metal, so that it touches both of the brass parts of the push, thus completing the circuit. The screw against which the hammer-bar rests, when not attracted by the magnet, should then be turned, a very little at a time, first in one direction and then in the other, until its right position is indicated by the ringing of the bell.

If there is still no sound after all joints, insulation, and adjustments have been tested, the bell itself must be at fault, and should be taken to an electrician for repair.

Mending China and Glass.—In the case of broken articles of china or glass which are used for liquids, either cold or hot, the pieces must be riveted together, as no cement will hold under such conditions for any length of time. Riveting can only be done by an expert, whose charge is usually 2d. for each rivet inserted, but if the work is properly done it will last almost indefinitely.

When the article is not intended to come into contact with any liquid, the fragments may be united with any good cement, but some of the adhesives which are said to mend anything are of little use. The broken pieces should be washed, care being taken not to rub the rough edges, and dried before the fire, or in the oven, until they are quite warm, so that the cement may not be chilled too rapidly. Apply the thinnest possible coating of cement to each surface, using a slip of wood, a brush is too bulky; then press the pieces together so as to squeeze out the superfluous cement, and hold the article until the adhesive has set, or tie it up with sewing-cotton or string, or apply moderate pressure in some other way. The cement which has exuded from the joint may be wiped off with a hot wet cloth, and the article must be left for some hours, in a moderate temperature, to allow the cement to get hard.

